EXAMINATION NOTICE NO.03/2016-IES/ISS

(LAST DATE FOR SUBMISSION OF APPLICATIONS : 12.02.2016) N FCONOMIC SERVICE/INDIAN STATISTICAL SERVICE EXAMINATION 2

DATED: 16.01.2016

INDIAN ECONOMIC SERVICE/INDIAN STATISTICAL SERVICE EXAMINATION, 2016 (COMMISSION'S WEBSITE: <u>www.upsc.gov.in</u>)

IMPORTANT

1. CANDIDATES TO ENSURE THEIR ELIGIBILITY FOR THE EXAMINATION:

Candidates applying for the examination should ensure that they fulfill all eligibility conditions for admission to the Examination. Their admission at all the stages of the examination will be purely provisional subject to satisfying the prescribed eligibility conditions.

Mere issue of e-Admit Card to the candidate will not imply that his/her candidature has been finally cleared by the Commission.

Verification of eligibility conditions with reference to original documents is taken up only after the candidate has qualified for Interview/Personality Test.

2. HOW TO APPLY:

Candidates are required to apply **online** only by using the website <u>www.upsconline.nic.in</u> Brief instructions for filling up the online Application Form have been given in Appendix-II. Detailed instructions are available on the above mentioned website.

3. LAST DATE FOR SUBMISSION OF APPLICATIONS:

The Online Applications can be filled up to 12th February, 2016 till 11.59 pm, after which the link will be disabled.

4(a) On-line application forms for IES/ISS Examination, 2016 will be uploaded on the Commission's Website from 16.01.2016. The date of closing of online application is 12.02.2016. Candidates are requested to fill up and submit the **Part-1** and **Part II** of their online application forms before the closing date of the application. Once the candidate successfully submits **Part-1** and **Part II** of their online applications, they would receive an auto generated email about the successful submission of their online application forms.

Candidates may note that e-Admit cards will be uploaded on the Commissions web-site on **07.03.**2016. The e-Admit cards will be available for downloading by the candidates till 04.04.2016. Only those candidates who would download their e-Admit Cards on or before **04.04.2016** will be allowed to appear for the IES/ISS Examination.

"Candidates may note that downloading of e-Admit Cards by the candidates on the Commission's website will not be available after **04.04.2016** and no request for issue of e-Admit Cards from the candidates under any circumstances will be entertained by the Commission after **04.04.2016**."

- 4(b) E-Admit Cards will be made available on the UPSC Website www.upsc.gov.in for downloading by the candidates with effect from **07.03.2016** till **04.04.2016** (11.59 P.M.). No physical Admit Cards will be send by post. All the applicants are required to provide valid and active **email id and mobile numbers** while filling up online application forms as the Commission will be using electronic mode for communication.
- 4 (c) The candidates may note that mere issue of e-Admit Cards shall not imply that his/her candidature has been finally cleared by the Commission and the admission of the candidate to the examination will remain purely provisional subject to satisfying the prescribed eligibility conditions required to be filled up by the candidates.

5. SPECIAL INSTRUCTIONS

Candidates are advised to read carefully "Special Instructions to the Candidates for Conventional Type Tests" (Appendix-III).

6. PENALTY FOR WRONG ANSWERS (In Objective Type Question Paper):

Candidates should note that there will be penalty (**Negative Marking**) for wrong answers marked by a candidate in the Objective Type Question Paper.

7. INSTRUCTIONS FOR FILLING UP OMR SHEETS:

- a) For both writing and marking answers in the OMR Sheets (Answer Sheet) candidates must use black ball point pen only. Pens with any other colours are prohibited. Do not use Pencil or Ink pen. Candidates are further advised to read Special Instructions contained in **Appendix-IV** of the Notice.
- b) Candidates should note that any omission/mistake/discrepancy in encoding/filling in details in the OMR answer sheet; especially with regard to Roll Number and Test Booklet Series Code, will render the answer sheet liable for rejection.

8. FACILITATION COUNTER FOR GUIDANCE OF CANDIDATES:

In case of any guidance/information/clarification regarding their applications, candidature etc. candidates can contact UPSC's Facilitation Counter near 'C' Gate of its campus in person or over **Telephone No.011-23385271/011-23381125/011-23098543** on working days between 10.00 Hrs. and 17.00 Hrs.

9. Mobile Phones Banned:

(a) Mobile phones, pagers, bluetooth or any other communication devices are not allowed inside the premises where the examination is being conducted. Any infringement of these instructions shall entail disciplinary action including ban from future examinations.

(b) Candidates are advised in their own interest not to bring any of the banned items including mobile phones/pagers/bluetooth or any valuable/costly items to the venue of the examination, as arrangement for safe-keeping cannot be assured. Commission will not be responsible for any loss in this regard.

CANDIDATES ARE REQUIRED TO APPLY ONLINE AT WWW.UPSCONLINE.NIC.IN ONLY. NO OTHER MODE IS ALLOWED FOR SUBMISSION OF APPLICATION

"Government strives to have a workforce which reflects gender balance and women candidates are encouraged to apply"

No.12/5/2015-E.I(B): A combined competitive examination for recruitment to Junior Time Scale of the Services mentioned in Para 2 below will be held by the Union Public Service Commission commencing from **13**rd **May, 2016** in accordance with the Rules published by the Ministry of Statistics & Programme Implementation in the Gazette of India dated the **16**th **January, 2016**. The examination will be held at the following centres:-

AHMEDABAD JAIPUR ALLAHABAD JAMMU BENGALURU KOLKATA BHOPAL LUCKNOW CHANDIGARH MUMBAI CHENNAI PATNA CUTTAK SHILLONG DELHI **SHIMLA**

DISPUR THIRUVANANTHAPURAM

HYDERABAD

The centres and the date of holding the examination as mentioned above are liable to be changed at the discretion of the Commission. Applicants should note that there will be a ceiling on the number of candidates allotted to each of the Centres, except Chennai, Delhi, Dispur, Kolkata and Ahmedabad. Allotment of Centres will be on the "first-apply-first allot" basis, and once the capacity of a particular Centre is attained, the same will be frozen. Applicants, who cannot get a Centre of their Choice due to ceiling, will be required to choose a Centre from the remaining ones. Applicants are, thus, advised that they may apply early so that they may apply early so that they could get a Centre of their choice.

NB: Notwithstanding the aforesaid provision, Commission reserve the right to change the Centres at their discretion if the situation demands.

Blind candidates will, however, be required to take the examination at anyone of the seven Centres viz. Chennai, Delhi, Hyderabad, Kolkata, Lucknow, Dispur and Mumbai.

Candidates admitted to the examination will be informed of the time table and place or places of examination. The candidates should note that no request for change of centre will be entertained.

- **2.(a)** The Services to which recruitment is to be made on the results of this examination and the approximate number of vacancies in Junior Time Scale of the Services are given below:-
- (i) Indian Economic Service 15 (ii) Indian Statistical Service - 13

NOTE: 1 vacancy has been kept reserved for PH category candidate for Locomotor Disability or Cerebral Palsy for Indian Statistical Service by the Government through IES/ISS Exam, 2016 and two backlog vacancies have been kept reserved for the PH Category candidates (one for Hearing Impairment Category and one for Locomotor Disability or Cerebral Palsy) in the Indian Economic Service through IES/ISS Exam, 2016.

The number of vacancies mentioned above is liable to alteration.

Reservation will be given effect to as per policy of the Govt.

(b) A candidate may compete for any one of the Services only viz. the Indian Economic Service or the Indian Statistical Service, for which he/she is eligible in terms of the rules.

A candidate will be eligible to get the benefit of community reservation only in case the particular caste to which the candidate belongs is included in the list of reserved communities issued by the Central Government. If a candidate indicates in his/her Application Form for Indian Economic Service Examination/Indian Statistical Service Examination that he/she belongs to General Category but subsequently write to the Commission to change his/her category, to a reserved one, such request shall not be entertained by the Commission.

While the above principle will be followed in general, there may be a few cases where there was a little gap (say 2-3 months) between the issuance of a Government Notification enlisting a particular community in the list of any of the reserved communities and the date of submission of the application by the candidate. In such cases the request of change of community from general to reserved may be considered by the Commission on merit basis.

Candidates seeking reservation/relaxation benefits available for SC/ST/OBC/PH/Ex-servicemen must ensure that they are entitled to such reservation/relaxation as per eligibility prescribed in the Rules/Notice. They should also be in possession of all the requisite certificates in the prescribed format in support of their claim as stipulated in the Rules/ Notice for such benefits, and these certificates should be dated earlier than the due date (closing date) of the application.

3. ELIGIBILITY CONDITIONS:

(I) Nationality

A candidate must be either: -

- (a) a citizen of India; or
- (b) a subject of Nepal; or
- (c) a subject of Bhutan; or
- (d) a Tibetan refugee who came over to India, before the 1st January, 1962, with the intention of permanently settling in India; or
- (e) a person of Indian origin who has migrated from Pakistan, Burma, Sri Lanka, East African countries of Kenya, Uganda, the United Republic of Tanzania, Zambia, Malawi, Zaire and Ethiopia or Vietnam with the intention of permanently settling in India:

Provided that a candidate belonging to categories (b), (c), (d) & (e) above shall be person in whose favour a certificate of eligibility has been issued by the Government of India.

A candidate in whose case a certificate of eligibility is necessary may be admitted to the examination but the offer of appointment may be given only after the necessary eligibility certificate has been issued to him/her by the Government of India.

(II) Age Limits:

- (a) A candidate must have attained the age of 21 years and must not have attained the age of 30 years on 1st August, 2016 i.e. he/she must have been born not earlier than 2nd August, 1986 and not later than 1st August, 1995.
 - (b) The upper age-limit prescribed above will be relaxable as follows:—
 - (i) up to a maximum of five years if a candidate belong to a Scheduled Caste or a Scheduled Tribe;
 - (ii) up to a maximum of three years in the case of candidate belonging to Other Backward Classes who are eligible to avail of reservation applicable to such candidates;
 - (iii) up to a maximum of five years if a candidate has ordinarily been domiciled in the State of Jammu and Kashmir during the period from the 1st January, 1980 to the 31st December, 1989;
 - (iv) up to a maximum of three years in the case of Defence Services Personnel disabled in operations during hostilities with any foreign country or in a disturbed area, and released as a consequence thereof;
 - (v) up to a maximum of five years in the case of ex-servicemen including Commissioned Officers and ECOs/SSCOs who have rendered at least five years Military Service as on 1st August, 2016 and have been released: (i) on completion of assignment (including those whose assignment is due to be completed within one year from 1st August, 2016 otherwise than by way of dismissal or discharge on account or misconduct or inefficiency; or (ii) on account of Physical disability attributable to Military Service; or (iii) on invalidment;
 - (vi) up to a maximum of five years in the case of ECOs/SSCOs who have completed an initial period of assignment of five years of Military Service as on 1st August, 2016 and whose assignment has been extended beyond five years and in whose case the Ministry of Defence issues a certificate that they can apply for Civil employment and that they will be released on three months' notice on selection from the date of receipt of offer of appointment;
 - (vii) up to a maximum of 10 years in the case of blind, deaf-mute and orthopaedically disabled persons.
- NOTE I- Candidates belonging to the Scheduled Castes and the Scheduled Tribes and Other Backward Classes who are also covered under any other clauses of para 3(II) (b) above. viz., those coming under the category of Ex-servicemen, persons domiciled in the State of J&K, blind, deaf-mute and orthopaedically handicapped etc. will be eligible for grant of cumulative age relaxation under both the categories.
- **NOTE II-** The term ex-servicemen will apply to the persons who are defined as Ex-servicemen in the Ex-servicemen (Re-employment in Civil Services and Posts) Rules, 1979, as amended from time to time.
- **NOTE III-** The age concession under para 3(II)(b)(v) and (vi) will not be admissible to Ex-servicemen and Commissioned Officers including ECOs/SSCOs, who are released on their own request.
- **NOTE IV-** Notwithstanding the provisions of age relaxation under para 3(II)(b)(vii) above, a physically disabled candidate will be considered to be eligible for appointment only if he/she (after such physical examination as the Government or appointing authority as the case may be, may prescribed) if found to satisfy the requirement of physical and medical standard for the concerned Services/Posts to be allocated to the physically disabled candidates by the Government.

SAVE AS PROVIDED ABOVE THE AGE LIMITS PRESCRIBED CAN IN NO CASE BE RELAXED

The date of birth, accepted by the Commission is that entered in the Matriculation or Secondary School Leaving Certificate or in a certificate recognised by an Indian University as equivalent to Matriculation or in an extract from a Register of Matriculates maintained by a University, which extract must be certified by the proper authority of the University or in the Higher Secondary or an equivalent examination certificate.

These certificates are required to be submitted only after the declaration of the result of the written part of the examination.

No other document relating to age like horoscopes, affidavits, birth extracts from Municipal Corporation, Service Records and the like will be accepted.

The expression Matriculation/Higher Secondary Examination Certificate in this part of the instruction includes the alternative certificates mentioned above.

- NOTE 1.- Candidate should note that only the Date of Birth as recorded in the Matriculation/ Higher Secondary Examination Certificate or an equivalent certificate as on the date of submission of applications will be accepted by the Commission, and no subsequent request for its change will be considered or granted.
- NOTE 2.- Candidates should also note that once Date of Birth has been claimed by them and entered in records of the Commission for the purpose of admission to an Examination, no change will be allowed subsequently (or at any other Examination of the Commission) on any grounds whatsoever.
- NOTE 3.- The candidate should exercise due care while entering their date of birth in respective column of the Online Application Form for the Examination. If on verification at any subsequent stage, any variation is found in their date of birth from the one entered in their matriculation or equivalent Examination certificate, disciplinary action will be taken against them by the Commission under the Rules.

(III) Minimum Educational Qualifications:

- (a) A candidate for the Indian Economic Service must have obtained a Post-Graduate Degree in Economics/Applied Economics/Business Economics/Econometrics from a University incorporated by of an Act of the Central or State Legislature in India or other Educational Institutes established by an Act Parliament or declared to be deemed as University under Section 3 of the University Grants Commission Act, 1956 or a Foreign University approved by the Central Government from time to time.
- (b) A candidate for the Indian Statistical Service must have obtained a Bachelor's Degree with Statistics/Mathematical Statistics/Applied Statistics as one of the subject or a Master's degree in Statistics/Mathematical Statistics/Applied Statistics from a University incorporated by an Act of the Central or State Legislature in India or other Educational Institutes established by an Act of Parliament or declared to be deemed as University under Section 3 of the University Grants Commission Act, 1956 or a Foreign University approved by the Central Government from time to time.
- NOTE 1.- A candidate who has appeared at an examination the passing of which would render them eligible to appear at this examination, but has not been informed of the result, may apply for admission to the examination. A candidate who intends to appear at such a qualifying examination may also apply. Such a candidate will be admitted to the examination, if otherwise eligible, but his/her admission would be deemed to be provisional and subject to cancellation, if his/her does not produce the proof of having passed the requisite qualifying examination along with the Detailed Application Form which will be required to be submitted by the candidate who qualify on the results of the written part of the examination.
- **NOTE 2.-** In exceptional cases, the Union Public Service Commission may treat a candidate, who has none of the foregoing qualification, as a qualified candidate provided that he/she has passed examinations conducted by other institutions the standard of which in the opinion of the Commission, justifies his/her admission to the examination.
- **NOTE 3.-** A candidate who is otherwise qualified but who has taken a degree from a Foreign University may also apply to the Commission and may be admitted to the examination at the discretion of the Commission.

(IV) Physical Standards:

Candidates must be physically fit according to **physical** standard for admission to Indian Economic Service/Indian Statistical Service Examination, 2016 as per Regulations given in Appendix III of the rules for the Indian Economic Service/Indian Statistical Service Examination, 2016 published in Gazette of India dated 16th January, 2016.

4. FFF

Candidates (excepting Female/SC/ST/PH candidates who are exempted from payment of fee) are required to pay a fee of Rs.200/- (Rupees Two Hundred only) either by depositing the money in any Branch of SBI by cash, or by using net banking facility of SBI, State Bank of Bikaner & Jaipur/State Bank of Hyderabad /State Bank of Mysore/ State Bank of Patiala/ State Bank of Travancore or by using Visa/Master Credit/Debit Card.

Note-1: Applicants who opt for "Pay by cash" mode should print the system generated Pay-in-Slip during Part-II registration and deposit the fee at the counter of SBI Branch on the next working day only. "Pay by Cash" Mode option will be deactivated at 23.59 hours of 11.02.2016 i.e. one day before the closing date; however, applicants who have generated their Pay-in-Slip before it is de-activated may pay at the counter of SBI Branch during baking hours on the closing date. Such applicants who are unable to pay by cash on the closing date i.e. during banking hours at SBI Branch, for reason whatsoever, even if holding a valid Pay-in-Slip, will have no other offline or Internet Banking Payment mode on the closing date i.e. till 23.59 hours of 12.02.2016.

Note-2: Candidates should note that payment of examination fee can be made only through the modes prescribed above. Payment of fee through any other mode is neither valid nor acceptable. Applications submitted without the prescribed fee/mode (unless remission of fee is claimed) shall be summarily rejected.

Note-3: Fee once paid shall not be refunded under any circumstances nor can the fee be held in reserve for any other examination or selection.

Note-4: For the applicants in whose case payments detailed have not been received from the bank, they will be treated as fictitious payment cases and their applications will be rejected in the first instance. A list of all such applicants shall be made available on the Commission's Website within two weeks after the last day of submission of online application. The applicants shall be required to submit the proof of their fee payment within 10 days from the date of such communication either by hand or by Speed Post to the Commission. On receipt of

documentary proof, genuine fee payment cases will be considered and their applications will be revived, if they are otherwise eligible.

ALL FEMALE CANDIDATES AND CANDIDATES BELONGING TO SCHEDULED CASES/ SCHEDULED TRIBES AND PHYSICALLY DISABLED CANDIDATES ARE NOT REQUIRED TO PAY ANY FEE. NO FEE EXEMPTION IS, HOWEVER, AVAILABLE TO OBC CANDIDATES AND THEY ARE REQUIRED TO PAY THE FULL PRESCRIBED FE.

Physically disabled persons are exempted from the payment of fee provided they are otherwise eligible for appointment to the Services to be filled on the results of this examination on the basis of the standards of medical fitness for these Services (including any concessions specifically extended to the physically disabled). A physically disabled candidate claiming age relaxation/fee concession will be required by the Commission to submit along with their Detailed Application Form, a certified copy of the certificate from a Government Hospital/Medical Board in support of his/her claim for being physically disabled.

NOTE: Notwithstanding the aforesaid provision for age relaxation/fee exemption, a physically disabled candidate will be considered to be eligible for appointment only if he/she (after such physical examination as the Government or the appointing authority, as the case may be, may prescribe) is found to satisfy the requirements of physical and medical standards for the concerned Services to be allocated to Physically disabled candidates by the Government.

Note-I: Applications without prescribed Fee (Unless remission of Fee is claimed shall be summarily rejected.

Note-II: Fee once paid shall not be refunded under any circumstances not can the fee be held in reserve for any other examination or selection.

Note-III: If any candidate who took the Indian Economic Service/Indian Statistical Service Examination held in 2015 wishes to apply for admission to this examination, he/she must apply online by the prescribed date without waiting for the results or any offer of appointment.

5. HOW TO APPLY:

- (a) Candidates are required to apply Online using the <u>www.upsconline.nic.in</u> Detailed instructions for filling up Online Applications are available on the above-mentioned website.
- (b) The applicants are advised to submit only single application. However, if due to any unavoidable situation, he/she submits another/multiple applications, then he/she must ensure that application with the higher RID is complete in all respects like applicants details, examination centre, photograph, signature, fee etc. The applicants who are submitting multiple applications should note that only the applications with higher RID (Registration ID) shall be entertained by the Commission and fee paid against one RID shall not be adjusted against any other RID.
- (c) All candidates, whether already in Government Service, or in Government owned industrial undertakings or other similar organizations or in private employment should apply directly to the Commission. Persons already in Government service, whether in a permanent or temporary capacity or as workcharged employees other than casual or daily rated employees or those serving under Public Enterprises are however, required to inform in writing their Head of Office/ Department that they have applied for the Examination.

Candidates should note that in case a communication is received from their employer by the Commission withholding permission to the candidates applying for/appearing at the examination, their applications will be liable to be rejected/candidature will be liable to be cancelled.

NOTE-I: While filling in his/her application form, the candidate should carefully decide about his/her choice for the centre for the Examination.

If any candidate appears at a centre other than the one indicated by the Commission in his/her e-Admit Card, the papers of such a candidate will not be evaluated and his/her candidature will be liable to cancellation.

NOTE-II: Incomplete or defective applications shall be summarily rejected. No representation or correspondence regarding such rejection shall be entertained under any circumstances.

(d) Candidates are not required to submit hard copy of their application to the Commission at this stage.

The candidates applying for the examination should ensure that they fulfill all the eligibility conditions for admission to the Examination. Their admission at all the stages of examination for which they are admitted by the Commission, viz. Written Examination and Interview Test will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If on verification, at any time, before or after the written examination or Interview Test, it is found that they do not fulfill any of the eligibility conditions; their candidature for the examination will be cancelled by the Commission.

Candidates are requested to keep ready the attested copies of the following documents for submission to the Commission soon after the declaration of the result of the written part of the part of the examination which is likely to be declared in the month of *August*, *2016*.

- 1. Certificate of Age.
- 2. Certificate of Educational Qualification indicating the Subjects.
- 3. Certificate in support of claim to belong to Schedule Caste, Scheduled Tribe and Other Backward Classes, where applicable.
- 4. Certificate in support of claim for age/fee concession, where applicable.
- 5. Certificate in support of being physically disabled (where applicable). Immediately after declaration of result of the written part of the examination, successful candidates may be intimated by the Commission electronically and they shall be asked to submit Detailed Application Form (DAF) online. The successful candidates have to send the printout of this DAF with each page duly signed along with the attested copies of the above mentioned certificates

of the above mentioned certificates to the Commission at that time. Originals will have to be produced at the time of interview. The interview letter to the candidates may also be issued electronically. If any of their claims is found to be incorrect, they may render themselves liable to disciplinary action by the Commission in terms of Rule 12 of the Rules for the Indian Economic Service/Indian Statistical Service Examination, 2016 notified in the Gazette of India dated 16th January, 2016 and also reproduced below:

A candidate who is or has been declared by Commission to be guilty of:

- i) obtaining support for his/her candidature by any means, or
- (ii) impersonating, or
- (iii) procuring impersonation by any person, or
- (iv) submitting fabricated documents or documents which have been tampered with, or
- (v) making statements which are incorrect or false, or suppressing material information, or
- (vi) resorting to any other irregular or improper means in connection with his/her candidature for the Examination, or
- (vii) using unfair means during the examination, or
- (viii) writing irrelevant matter including, obscene language or pornographic matter, in the script(s), or
- (ix) misbehaving in any other manner in the examination hall, or
- (x) harassing or doing bodily harm to the staff employed by the Commission for the conduct of their examination, or
- (xi) being in possession of or using mobile phone, pager, bluetooth or any electronic equipment or device or any other equipment capable of being used as a communication device during the examination, or
- (xii) violating any of the instructions issued to candidates along with their Admission Certificates permitting them to take the examination, or
- (xiii) attempting to commit, or as the case may be abetting the commission of all or any of the acts specified in the foregoing clauses;

may in addition to rendering himself/herself liable to criminal prosecution be liable

- (a) to be disqualified by the Commission from the examination for which he/she is a candidate : and/or
- (b) to be debarred either permanently or for specified period :—
 - (i) by the Commission from any examination or selection held by them;
 - (ii) by the Central Government from any employment under them; and
- (c) if he/she is already in service under Government to disciplinary action under the appropriate rules:

Provided that no penalty under this rule shall be imposed except after:

- giving the candidate an opportunity of making such representation in writing as he/she may wish to make in that behalf; and
- (ii) taking the representation, if any, submitted by the candidate, within the period allowed to him/ her into consideration.

6. LAST DATE FOR SUBMISSION OF APPLICATIONS:

The Online Applications can be filled upto 12th February, 2016 till 11.59 PM after which the link will be disabled.

7. CORRESPONDENCE WITH THE COMMISSION:

The Commission will not enter into any correspondence with the candidates about their candidature except in the following cases :

(i) An e-Admit card will be made available in the UPSC website [www.upsc.gov.in] for downloading by candidates with effect from 7th March, 2016 till 4th April, 2016. No physical Admit Card will be sent by post. All the applicants are required to provide valid and active E-Mail I.D. while filling up Online Application Form as the Commission may use electronic mode for contacting them. No request for issue of E-Admit Card will be entertained by Commission after 4th April, 2016 under any circumstances. For downloading the e-Admit Card the candidate must have his/her vital parameters like RID and Date of Birth or Roll No. (if received) & date of birth or name, father's name & Date of Birth available with him/her. If a candidate is not able to download his/her e-Admit Card or any other communication regarding his/her candidature for the examination till 14th March, 2016 is not received from the Commission, he/she should at once contact the Commission. Information in this regard can also be obtained from the Facilitation Counter located in the Commission's Office either in person or over phone Nos.011-23381125/011-23385271/011-23098543. In case no communication is received in the Commission's office from the candidate regarding non-receipt of his/her e-Admit Card till 4th April, 2016, he/she himself/herself will be solely responsible for non-receipt of his/her e-Admit Card.

No candidate will ordinarily be allowed to take the examination unless he/she holds an e-admission certificate for the examination. On receipt of e-Admit Card, check it carefully and bring discrepancies/ errors, if any, to the notice of UPSC immediately.

The candidates should note that their admission to the examination will be purely provisional based on the information given by them in the Application Form. This will be subject to verification of all the eligibility conditions by the UPSC.

The mere fact that an e-Admit Card to the Examination has been issued to a candidate will not imply that the Commission has finally cleared his/her candidature or that the Commission has accepted entries made by the candidate in his/her application for the Examination as true and correct. Candidates may note that the Commission will take up the verification of eligibility conditions of a candidate, with reference to original documents, only after the candidate has qualified the Indian Economic Service/Indian Statistical Service (Written) Examination. Unless the Commission formally confirms candidature, it continues to be provisional.

The decision of the Commission as to the eligibility or otherwise of a candidate for admission to the Examination shall be final.

Candidates should note that the name in the **e-Admit Card** in some cases may be abbreviated due to technical reasons.

- (ii) In the event of a candidate downloading more than one e-admission certificate from the website of the Commission, he/she should use only one of these admission certificates for appearing in the examination.
- (iii) The candidates must ensure that their E-Mail IDs given in their Online Applications are valid and active as the Commission may use electronic mode of communication while contacting them at different stages of examination processes.
- (iv) A candidate must see that communications sent to him/her at the address stated in his/her application are redirected, if necessary. Change in address should be communicated to the Commission at the earliest opportunity. Although the Commission make every effort to take account of such changes, they cannot accept any responsibility in the matter.
- (v) If a candidate receives an **e-Admit Card** in respect of some other candidate the same should immediately be brought to the notice of Commission with a request to issue the correct **e-Admit Card**. Candidates may note that they will not be allowed to take the examination on the strength of an **e-Admit Card** issued in respect of another candidate.

IMPORTANT: ALL COMMUNICATIONS TO THE COMMISSION SHOULD INVARIABLY CONTAIN THE FOLLOWING PARTICULARS:

- 1. NAME AND YEAR OF THE EXAMINATION
- 2. REGISTRATION I.D. (RID)
- 3. ROLL NUMBER (IF RECEIVED)
- 4. NAME OF CANDIDATE (IN FULL AND IN BLOCK LETTERS)
- 5. COMPLETE POSTAL ADDRESS AS GIVEN IN THE APPLICATION.
- 6. VALID AND ACTIVE E-MAIL ID.

N.B.I: Communications not containing the above particulars may not be attended to.

N.B.II : If a letter/communication is received from a candidate after an examination has been held and it does not give his/her full name and Roll number, it will be ignored and no action will be taken thereon.

Candidates are strongly advised to keep a printout or soft copy of their online application for future references.

8. The eligibility for availing reservation against the vacancies reserved for the physically disabled persons shall be the same as prescribed in "The Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995."

Provided further that the physically disabled candidates shall also be required to meet special eligibility criteria in terms of physical requirements/functional classification (abilities/ disabilities) consistent with requirements of the identified Service/Post as may be prescribed by its Cadre Controlling Authority.

The physical requirement and functional classification can for example be one or more of the following:-

Code		PHYSICAL REQUIREMENTS
F/MF	1.	Work performed by Manipulating by Fingers.
PP	2.	Work performed by Pulling and Pushing.
L	3.	Work performed by Lifting.
KC	4.	Worked performed by Kneeling and Crouching
В	5.	Work performed by Bending.
S	6.	Work performed by Sitting (on bench or chair).
ST	7.	Work performed by Standing.
W	8.	Work performed by Walking.
SE	9.	Work performed by Seeing
С	10.	Work performed by Communication
Н	11.	Work performed by Hearing/Speaking.
RW	12.	Work performed by Reading and Writing.
Code		FUNCTIONAL CLASSIFICATION
BL	1.	Both legs affected but not arms\
BA	2.	Both arms affected—
		(a) impaired reach.
		(b) weakness of grip.
BLA	3.	Both legs and both arms affected.
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OL	4.	One leg affected (Right or Left)— (a) impaired reach (b) weakness of grip (c) ataxic.
OLA	5.	One arm and one leg affected
		(a) impaired reach
		(b) weakness of grip
		(c) ataxic.
OA	6.	One arm affected (Right or Left)
		(a) impaired reach
		(b) weakness of grip
		(c) ataxic.
BH	7.	Stiff back and hips (cannot sit or stoop)
MW	8.	Muscular Weakness and limited physical endurance
В	9.	The blind
PB/LV	10	Partially blind /Low Vision
HI	11	Hearing Impaired
D	12	The deaf
PD	13	Partially deaf

- 9. No request for withdrawal of candidature received from a candidate after he/she has submitted his/her application will be entertained under any circumstances.
- 10. Details about the scheme of examination, standard and syllabi of the subjects etc. may be seen in Appendix-I of this Notice.

(Sanjay Mehrishi) Joint Secretary Union Public Service Commission

APPENDIX-I SCHEME OF EXAMINATION SECTION-I

The examination shall be conducted according to the following plan—

Part I-Written examination carrying a maximum of 1000 marks in the subjects as shown below.

Part II-Viva voce of such candidates as may be called by the Commission carrying a maximum of 200 marks.

PART-I

The subjects of the written examination under Part-I, the maximum marks allotted to each subject/paper and the time allowed shall be as follows:

A. Indian Economic Service

A. Illulali Econolliic Service			
SI. Subject	Maximum	Time	
No.	Marks	Allowed	
1. General English	100	3 hrs.	
2. General Studies	100	3 hrs.	
3. General Economics-I	200	3 hrs.	
4. General Economics-II	200	3 hrs.	
5. General Economics-III	200	3 hrs.	
6. Indian Economics	200	3 hrs.	
B. Indian Statistical Service			
SI. Subject	Maximum	Time	
No.	Marks	Allowed	
1. General English	100	3 hrs.	
2. General Studies	100	3 hrs.	
3. Statistics-I (Objective)	200	2 hrs.	
4. Statistics-II (Objective)	200	2 hrs.	
5. Statistics-III (Subjective)	200	3 hrs.	
6. Statistics-IV (Subjective)	200	3 hrs.	

- Note-1: Statistics I & II will be of Objective Type Questions (80 questions with maximum marks of 200 in each paper) to be attempted in 120 minutes.
- Note-2: Statistics III & IV will be of Descriptive Type having Short Answer/ Small Problems Questions (50%) and Long Answer and Comprehension problem questions (50%]. At least one Short Answer and One Long Answer Question from each section is compulsory. In Statistics-IV, equal number of questions i.e. 50% weightage from all the sub-sections below and candidates have to choose any two subsections and answer.
- Note 3: The papers on General English and General Studies, common to both Indian Economic Service and Indian Statistical Service will be of subjective type.

- Note 4: All other papers of Indian Economic Service will be of subjective type.
- Note-5: The details of standard and syllabi for the examination are given in Section-II below.
- 2. The question papers in all subjects in Indian Economic Service Examination and in Indian Statistical Service Examination will be of Conventional (essay) type except in Statistics Paper I and Statistics Paper II which are Objective Type Papers.
- 3. ALL QUESTION PAPERS MUST BE ANSWERED IN ENGLISH; QUESTION PAPERS WILL BE SET IN ENGLISH ONLY.
- 4. Candidates must write the papers in their own hand. In no circumstances will they be allowed the help of a scribe to write the answers for them. However, blind candidates and candidates with Locomotor Disability and Cerebral Palsy where dominant (writing) extremity is affected to the extent of slowing the performance of function (minimum of 40 % impairment) will be allowed to write the examination with the help of a scribe.

Compensatory time of 20 minutes per hour for each paper will also be allowed to a blind candidate and the candidates with locomotor disability and cerebral palsy where dominant (writing) extremity is affected to the extent of slowing the performance of function (minimum of 40% impairment).

- Note (1): The eligibility conditions of a scribe, his/her conduct inside the examination hall and the manner in which an extent to which he/she can help the blind candidate in writing the Indian Economic Service/Indian Statistical Service Examination shall be governed by the instructions issued by the UPSC in this regard. Violation of all or any of the said instructions shall entail the cancellation of the candidature of the blind candidate in addition to any other action that the UPSC may take against the scribe.
- **Note (2):** For purpose of these rules the candidate shall be deemed to be a blind candidate if the percentage of visual impairment is forty per cent (40 %) or more. However, the extent of visual impairment should have to be corroborated by a certificate in the prescribed proforma from a Medical Board constituted by the Central/State Government along with their Detailed Application Form.
- Note (3): The concession admissible to blind candidates shall not be admissible to those suffering from Myopia.
 - 5. The Commission have the discretion to fix qualifying marks in any or all the subjects of the examination.
- 6. If a candidate's handwriting is not easily legible, a deduction will be made on this account, from the total marks otherwise accruing to him/her.
 - 7. Marks will not be allotted for mere superficial knowledge.
 - 8. Credit will be given for orderly effective and exact expression combined with due economy of words.
 - 9. In the guestion papers, wherever required, SI Units will be used.
- 10. Candidates will be allowed the use of Scientific (Non-Programmable type) Calculators at the examination. Programmable type calculators will, however, not be allowed and the use of such calculators shall tantamount to resorting to unfair means by the candidates. Loaning or interchanging of calculators in the Examination Hall is not permitted.
- 11. Candidates should use only International Form of Indian numerals (e.g., 1, 2, 3, 4, 5, 6 etc.) while answering question papers.

PART - II

Viva voce—The candidate will be interviewed by a Board of competent and unbiased observers who will have before them a record of his/her career. The object of the interview is to assess his/her suitability for the service for which he/she has competed. The interview is intended to supplement the written examination for testing the general and specialised knowledge and abilities for the candidate. The candidate will be expected to have taken an intelligent interest not only in his/her subjects of academic study but also in events which are happening around him/her both within and outside his/her own State or Country as well as in modern currents of thought and in new discoveries which should rouse the curiosity of well educated youth.

The technique of the interview is not that of a strict cross-examination, but of a natural, through directed and purposive conversation intended to reveal the candidate's mental qualities and his/her grasp of problems. The Board will pay special attention to assess the intellectual curiosity, critical powers of assimilation, balance of judgment and alertness of mind, the ability for social cohesion, integrity of character initiative and capacity for leadership.

SECTION-II

STANDARD AND SYLLABI

The standard of papers in General English and General Studies will be such as may be expected of a graduate of an Indian University.

The standard of papers in the other subjects will be that of the Master's degree examination of an Indian University in the relevant disciplines. The candidates will be expected to illustrate theory by facts, and to analyse problems with the help of theory. They will be expected to be particularly conversant with Indian problems in the field(s) of Economics/Statistics.

GENERAL ENGLISH

Candidates will be required to write an essay in English. Other questions will be designed to test their understanding of English and workman like use of words. Passages will usually be set for summary or precis.

GENERAL STUDIES

General knowledge including knowledge of current events and of such matters of everyday observation and experience in their scientific aspects as may be expected of an educated person who has not made a special study

of any scientific subject. The paper will also include questions on Indian Polity including the political system and the Constitution of India, History of India and Geography of a nature which a candidate should be able to answer without special study.

GENERAL ECONOMICS - I

PART A:

- 1. Theory of Consumer's Demand—Cardinal utility Analysis: Marginal utility and demand, Consumer's surplus, Indifference curve, Analysis and utility function, Price income and substitution effects, Slutsky theorem and derivation of demand curve, Revealed preference theory. Duality and indirect utility function and expenditure function, Choice under risk and uncertainty. Simple games of complete information, Concept of Nash equilibrium.
- **2. Theory of Production:** Factors of production and production function. Forms of Production Functions: Cobb Douglas, CES and Fixed coefficient type, Translog production function. Laws of return, Returns to scale and Return to factors of production. Duality and cost function, Measures of productive efficiency of firms, technical and allocative efficiency. Partial Equilibrium versus General Equilibrium approach. Equilibrium of the firm and industry.
- **3. Theory of Value:** Pricing under different market structures, public sector pricing, marginal cost pricing, peak load pricing, cross-subsidy free pricing and average cost pricing. Marshallian and Walrasian stability analysis. Pricing with incomplete information and moral hazard problems.
- **4. Theory of Distribution:** Neo classical distribution theories; Marginal productivity theory of determination of factor prices, Factor shares and adding up problems. Euler's theorem, Pricing of factors under imperfect competition, monopoly and bilateral monopoly. Macro- distribution theories of Ricardo, Marx, Kaldor, Kalecki.
- **5. Welfare Economics:** Inter-personal comparison and aggression problem, Public goods and externalities, Divergence between social and private welfare, compensation principle. Pareto optimality. Social choice and other recent schools, including Coase and Sen.

PART B: Quantitative Methods in Economics

- 1. Mathematical Methods in Economics: Differentiation and Integration and their application in economics. Optimisation techniques, Sets, Matrices and their application in economics. Linear algebra and Linear programming in economics and Input-output model of Leontief.
- 2. Statistical and Econometric Methods: Measures of central tendency and dispersions, Correlation and Regression. Time series. Index numbers. Sampling of curves based on various linear and non-linear function. Least square methods and other multivariate analysis (only concepts and interpretation of results). Analysis of Variance, Factor analysis, Principle component analysis, Discriminant analysis. Income distribution: Pareto law of Distribution, longnormal distribution, measurement of income inequality. Lorenz curve and Gini coefficient. Univariate and multivariate regression analysis. Problems and remedies of Hetroscedasticity, Autocorrelation and Multicollnearity.

GENERAL ECONOMICS - II

- **1. Economic Thought:** Mercantilism Physiocrats, Classical, Marxist, Neo-classical, Keynesian and Monetarist schools of thought.
- **2. Concept of National Income and Social Accounting:** Measurement of National Income, Inter relationship between three measures of national income in the presence of Government sector and International transactions. Environmental considerations, Green national income.
- **3. Theory of employment, Output, Inflation, Money and Finance:** The Classical theory of Employment and Output and Neo classical approaches. Equilibrium, analysis under classical and neo classical analysis. Keynesian theory of Employment and output. Post Keynesian developments. The inflationary gap; Demand pull versus cost push inflation, the Philip's curve and its policy implication. Classical theory of Money, Quantity theory of Money. Friedman's restatement of the quantity theory, the neutrality of money. The supply and demand for loanable funds and equilibrium in financial markets, Keynes' theory on demand for money. **IS-LM Model and AD-AS Model in Keynesian Theory.**
- **4. Financial and Capital Market:** Finance and economic development, financial markets, stock market, gift market, banking and insurance. Equity markets, Role of primary and secondary markets and efficiency, Derivatives markets; Future and options.
- **5. Economic Growth and Development:** concepts of Economic Growth and Development and their measurement: characteristics of less developed countries and obstacles to their development growth, poverty and income distribution. Theories of growth: Classical Approach: Adam Smith, Marx and Schumpeter- Neo classical approach; Robinson, Solow, Kaldor and Harrod Domar. Theories of Economic Development, Rostow, Rosenstein-Roden, Nurske, Hirschman, Leibenstien and Arthur Lewis, Amin and Frank (Dependency scool) respective role of state and the market. Utilitarian and Welfarist approach to social development and A.K. Sen's critique. Sen's capability approach to economic development. The Human Development Index. Physical quality of Life Index and Human Poverty Index. **Basics of Endogenous Growth Theory.**
- **6. International Economics:** Gains from International Trade, Terms of Trade, policy, international trade and economic development- Theories of International Trade; Ricardo, Haberler, Heckscher- Ohlin and Stopler-Samuelson- Theory of Tariffs- Regional Trade Arrangements. **ASEAN Crisis of 1998, Global Financial Crisis of 2008 and Euro Zone Crisis- Causes and Impact.**

- **7. Balance of Payments:** Disequilibrium in Balance of Payments, Mechanism of Adjustments, Foreign Trade Multiplier, Exchange Rates, Import and Exchange Controls and Multiple Exchange Rates. **IS-LM Model and Mundell-Fleming Model of Balance of Payments.**
- **8. Global Institutions:** UN agencies dealing with economic aspects, World Bank, IMF and WTO, Multinational Corporations. **G-20.**

GENERAL ECONOMICS - III

- 1. Public Finance—Theories of taxation: Optimal taxes and tax reforms, incidence of taxation. Theories of public expenditure: objectives and effects of public expenditure, public expenditure policy and social cost benefit analysis, criteria of public investment decisions, social rate of discount, shadow prices of investment, unskilled labour and foreign exchange. Budgetary deficits. Theory of public debt management.
- 2. Environmental Economics—Environmentally sustainable development, Rio process 1992 to 2012, Green GDP, UN Methodology of Integrated Environmental and Economic Accounting. Environmental Values: Users and non-users values, option value. Valuation Methods: Stated and revealed preference methods. Design of Environmental Policy Instruments: Pollution taxes and pollution permits, collective action and informal regulation by local communities. Theories of exhaustible and renewable resources. International environmental agreements, RIO Conventions. Climatic change problems. Kyoto protocol, UNFCC, Bali Action Plan, post 2015 agreements, tradable permits and carbon taxes. Carbon Markets and Market Mechanisms. Climate Change Finance and Green Climate Fund.
- **3.** Industrial Economics—Market structure, conduct and performance of firms, product differentiation and market concentration, monopolistic price theory and oligopolistic interdependence and pricing, entry preventing pricing, micro level investment decisions and the behaviour of firms, research and development and innovation, market structure and profitability, public policy and development of firms.
- **4. State, Market and Planning**—Planning in a developing economy. Planning regulation and market. Indicative planning. Decentralised planning.

INDIAN ECONOMICS

- **1. History of development and planning** Alternative development strategies—goal of self-reliance based on import substitution and protection, the post-1991 globalisation strategies based on stabilisation and structural adjustment packages: fiscal reforms, financial sector reforms and trade reforms.
- **2. Federal Finance**—Constitutional provisions relating to fiscal and financial powers of the States, Finance Commissions and their formulae for sharing taxes, Financial aspect of Sarkaria Commission Report, financial aspects of 73rd and 74th Constitutional Amendments.
- **3. Budgeting and Fiscal Policy**—Tax, expenditure, budgetary deficits, pension and fiscal reforms, Public debt management and reforms, Fiscal Responsibility and Budget Management (FRBM) Act, Black money and Parallel economy in India—definition, estimates, genesis, consequences and remedies.
- **4. Poverty, Unemployment and Human Development**—Estimates of inequality and poverty measures for India, appraisal of Government measures, India's human development record in global perspective. India's population policy and development.
- **5. Agriculture and Rural Development Strategies** Technologies and institutions, land relations and land reforms, rural credit, modern farm inputs and marketing— price policy and subsidies; commercialisation and diversification. Rural development programmes including poverty alleviation programmes, development of economic and social infrastructure and New Rural Employment Guarantee Scheme.
- **6. India's experience with Urbanisation and Migration**—Different types of migratory flows and their impact on the economies of their origin and destination, the process of growth of urban settlements; urban development strategies.
- **7. Industry: Strategy of industrial development** Industrial Policy Reform; Reservation Policy relating to small scale industries. Competition policy, Sources of industrial finances. Bank, share market, insurance companies, pension funds, non-banking sources and foreign direct investment, role of foreign capital for direct investment and portfolio investment, Public sector reform, privatisation and disinvestment.
- **8. Labour**—Employment, unemployment and underemployment, industrial relations and labour welfare—strategies for employment generation—Urban labour market and informal sector employment, Report of National Commission on Labour, Social issues relating to labour e.g. Child Labour, Bonded Labour International Labour Standard and its impact.
- 9. Foreign trade—Salient features of India's foreign trade, composition, direction and organisation of trade, recent changes in trade, balance of payments, tariff policy, exchange rate, India and WTO requirements. Bilateral Trade Agreements and their implications.
- 10. Money and Banking—Financial sector reforms, Organisation of India's money market, changing roles of the Reserve Bank of India, commercial banks, development finance institutions, foreign banks and non-banking financial institutions, Indian capital market and SEBI, Development in Global Financial Market and its relationship with Indian Financial Sector. Commodity Market in India-Spot and Futures Market, Role of FMC.
- **11. Inflation**—Definition, trends, estimates, consequences and remedies (control): Wholesale Price Index. Consumer Price Index: components and trends.

STATISTICS-I (OBJECTIVE TYPE)

(i) Probability:

Classical and axiomatic definitions of Probability and consequences. Law of total probability, Conditional probability, Bayes' theorem and applications. Discrete and continuous random variables. Distribution functions and their properties.

Standard discrete and continuous probability distributions - Bernoulli, Uniform, Binomial, Poisson, Geometric, Rectangular, Exponential, Normal, Cauchy, Hyper geometric, Multinomial, Laplace, Negative binomial, Beta, Gamma, Lognormal. Random vectors, Joint and marginal distributions, conditional distributions, Distributions of functions of random variables. Modes of convergences of sequences of random variables - in distribution, in probability, with probability one and in mean square. Mathematical expectation and conditional expectation. Characteristic function, moment and probability generating functions, Inversion, uniqueness and continuity theorems. Borel 0-1 law, Kolmogorov's 0-1 law. Tchebycheff's and Kolmogorov's inequalities. Laws of large numbers and central limit theorems for independent variables.

(ii) Statistical Methods:

Collection, compilation and presentation of data, charts, diagrams and histogram. Frequency distribution. Measures of location, dispersion, skewness and kurtosis. Bivariate and multivariate data. Association and contingency. Curve fitting and orthogonal polynomials. Bivariate normal distribution. Regression-linear, polynomial. Distribution of the correlation coefficient, Partial and multiple correlation, Intraclass correlation, Correlation ratio.

Standard errors and large sample test. Sampling distributions of sample mean, sample variance, t, chi-square and F; tests of significance based on them, Small sample tests.

Non-parametric tests-Goodness of fit, sign, median, run, Wilcoxon, Mann-Whitney, Wald-Wolfowitz and Kolmogorov-Smirnov. Order statistics-minimum, maximum, range and median. Concept of Asymptotic relative efficiency.

(iii) Numerical Analysis:

Finite differences of different orders: Δ , E and D operators, factorial representation of a polynomial, separation of symbols, sub-division of intervals, differences of zero.

Concept of interpolation and extrapolation: Newton Gregory's forward and backward interpolation formulae for equal intervals, divided differences and their properties, Newton's formula for divided difference, Lagrange's formula for unequal intervals, central difference formula due to Gauss, Sterling and Bessel, concept of error terms in interpolation formula.

Inverse interpolation: Different methods of inverse interpolation.

Numerical differentiation: Trapezoidal, Simpson's one-third and three-eight rule and Waddles rule.

Summation of Series: Whose general term (i) is the first difference of a function (ii) is in geometric progression.

Numerical solutions of differential equations: Euler's Method, Milne's Method, Picard's Method and Runge-Kutta Method.

(iv) Computer application and Data Processing:

Basics of Computer: Operations of a computer, Different units of a computer system like central processing unit, memory unit, arithmetic and logical unit, input unit, output unit etc., Hardware including different types of input, output and peripheral devices, Software, system and application software, number systems, Operating systems, packages and utilities, Low and High level languages, Compiler, Assembler, Memory – RAM, ROM, unit of computer memory (bits, bytes etc.), Network – LAN, WAN, internet, intranet, basics of computer security, virus, antivirus, firewall, spyware, malware etc.

Basics of Programming: Algorithm, Flowchart, Data, Information, Database, overview of different programming languages, frontend and backend of a project, variables, control structures, arrays and their usages, functions, modules, loops, conditional statements, exceptions, debugging and related concepts.

STATISTICS- II (OBJECTIVE TYPE)

(i) Linear Models:

Theory of linear estimation, Gauss-Markov linear models, estimable functions, error and estimation space, normal equations and least square estimators, estimation of error variance, estimation with correlated observations, properties of least square estimators, generalized inverse of a matrix and solution of normal equations, variances and covariances of least square estimators.

One way and two-way classifications, fixed, random and mixed effects models. Analysis of variance (two-way classification only), multiple comparison tests due to Tukey, Scheffe and Student-Newmann-Keul-Duncan.

(ii) Statistical Inference and Hypothesis Testing:

Characteristics of good estimator. Estimation methods of maximum likelihood, minimum chi-square, moments and least squares. Optimal properties of maximum likelihood estimators. Minimum variance unbiased estimators. Minimum variance bound estimators. Cramer-Rao inequality. Bhattacharya bounds. Sufficient estimator. factorization theorem. Complete statistics. Rao-Blackwell theorem. Confidence interval estimation. Optimum confidence bounds. Resampling, Bootstrap and Jacknife.

Hypothesis testing: Simple and composite hypotheses. Two kinds of error. Critical region. Different types of critical regions and similar regions. Power function. Most powerful and uniformly most powerful tests. Neyman-Pearson fundamental lemma. Unbiased test. Randomized test. Likelihood ratio test. Wald's SPRT, OC and ASN functions. Elements of decision theory.

(iii) Official Statistics:

National and International official statistical system

Official Statistics: (a) Need, Uses, Users, Reliability, Relevance, Limitations, Transparency, its visibility (b) Compilation, Collection, Processing, Analysis and Dissemination, Agencies Involved, Methods

National Statistical Organization: Vision and Mission, NSSO and CSO; roles and responsibilities; Important activities, Publications etc.

National Statistical Commission: Need, Constitution, its role, functions etc; Legal Acts/ Provisions/ Support for Official Statistics; Important Acts

Index Numbers: Different Types, Need, Data Collection Mechanism, Periodicity, Agencies Involved, Uses

Sector Wise Statistics: Agriculture, Health, Education, Women and Child etc. Important Surveys & Census, Indicators, Agencies and Usages etc.

National Accounts: Definition, Basic Concepts; issues; the Strategy, Collection of Data and Release.

Population Census: Need, Data Collected, Periodicity, Methods of data collection, dissemination, Agencies involved.

Misc: Socio Economic Indicators, Gender Awareness/Statistics, Important Surveys and Censuses.

STATISTICS- III (DESCRIPTIVE TYPE)

(i) Sampling Techniques:

Concept of population and sample, need for sampling, complete enumeration versus sampling, basic concepts in sampling, sampling and Non-sampling error, Methodologies in sample surveys (questionnaires, sampling design and methods followed in field investigation) by NSSO.

Subjective or purposive sampling, probability sampling or random sampling, simple random sampling with and without replacement, estimation of population mean, population proportions and their standard errors. Stratified random sampling, proportional and optimum allocation, comparison with simple random sampling for fixed sample size. Covariance and Variance Function.

Ratio, product and regression methods of estimation, estimation of population mean, evaluation of Bias and Variance to the first order of approximation, comparison with simple random sampling.

Systematic sampling (when population size (N) is an integer multiple of sampling size (n)). Estimation of population mean and standard error of this estimate, comparison with simple random sampling.

Sampling with probability proportional to size (with and without replacement method), Des Raj and Das estimators for n=2, Horvitz-Thomson's estimator

Equal size cluster sampling: estimators of population mean and total and their standard errors, comparison of cluster sampling with SRS in terms of intra-class correlation coefficient.

Concept of multistage sampling and its application, two-stage sampling with equal number of second stage units, estimation of population mean and total. Double sampling in ratio and regression methods of estimation. Concept of Interpenetrating sub-sampling.

(ii) Econometrics:

Nature of econometrics, the general linear model (GLM) and its extensions, ordinary least squares (OLS) estimation and prediction, generalized least squares (GLS) estimation and prediction, heteroscedastic disturbances, pure and mixed estimation.

Auto correlation, its consequences and tests. Theil BLUS procedure, estimation and prediction, multi-collinearity problem, its implications and tools for handling the problem, ridge regression.

Linear regression and stochastic regression, instrumental variable estimation, errors in variables, autoregressive linear regression, lagged variables, distributed lag models, estimation of lags by OLS method, Koyck's geometric lag model.

Simultaneous linear equations model and its generalization, identification problem, restrictions on structural parameters, rank and order conditions.

Estimation in simultaneous equations model, recursive systems, 2 SLS estimators, limited information estimators, k-class estimators, 3 SLS estimator, full information maximum likelihood method, prediction and simultaneous confidence intervals.

(iii) Applied Statistics:

Index Numbers: Price relatives and quantity or volume relatives, Link and chain relatives composition of index numbers; Laspeyre's, Paasches', Marshal Edgeworth and Fisher index numbers; chain base index number, tests for index number, Construction of index numbers of wholesale and consumer prices, Income distribution-Pareto and Engel curves, Concentration curve, Methods of estimating national income, Inter-sectoral flows, Inter-industry table, Role of CSO. Demand Analysis

Time Series Analysis: Economic time series, different components, illustration, additive and multiplicative models, determination of trend, seasonal and cyclical fluctuations.

Time-series as discrete parameter stochastic process, auto covariance and autocorrelation functions and their properties.

Exploratory time Series analysis, tests for trend and seasonality, exponential and moving average smoothing. Holt and Winters smoothing, forecasting based on smoothing.

Detailed study of the stationary processes: (1) moving average (MA), (2) auto regressive (AR), (3) ARMA and (4) AR integrated MA (ARIMA) models. Box-Jenkins models, choice of AR and MA periods.

Discussion (without proof) of estimation of mean, auto covariance and autocorrelation functions under large sample theory, estimation of ARIMA model parameters.

Spectral analysis of weakly stationary process, periodogram and correlogram analyses, computations based on Fourier transform.

STATISTICS-IV (DESCRIPTIVE TYPE)

(Equal number of questions i.e. 50% weightage from all the subsections below and candidates have to choose any two subsections and answer)

(i) Operations Research and Reliability:

Definition and Scope of Operations Research: phases in Operation Research, models and their solutions, decision-making under uncertainty and risk, use of different criteria, sensitivity analysis.

Transportation and assignment problems. Bellman's principle of optimality, general formulation, computational methods and application of dynamic programming to LPP.

Decision-making in the face of competition, two-person games, pure and mixed strategies, existence of solution and uniqueness of value in zero-sum games, finding solutions in 2x2, 2xm and mxn games.

Analytical structure of inventory problems, EOQ formula of Harris, its sensitivity analysis and extensions allowing quantity discounts and shortages. Multi-item inventory subject to constraints. Models with random demand, the static risk model. P and Q- systems with constant and random lead times.

Queuing models – specification and effectiveness measures. Steady-state solutions of M/M/1 and M/M/c models with associated distributions of queue-length and waiting time. M/G/1 queue and Pollazcek-Khinchine result.

Sequencing and scheduling problems. 2-machine n-job and 3-machine n-job problems with identical machine sequence for all jobs

Branch and Bound method for solving travelling salesman problem.

Replacement problems – Block and age replacement policies.

PERT and CPM – basic concepts. Probability of project completion.

Reliability concepts and measures, components and systems, coherent systems, reliability of coherent systems.

Life-distributions, reliability function, hazard rate, common univariate life distributions — exponential, weibull, gamma, etc. Bivariate exponential distributions. Estimation of parameters and tests in these models.

Notions of aging – IFR, IFRA, NBU, DMRL and NBUE classes and their duals. Loss of memory property of the exponential distribution.

Reliability estimation based on failure times in variously censored life-tests and in tests with replacement of failed items. Stress-strength reliability and its estimation.

(ii) Demography and Vital Statistics:

Sources of demographic data, census, registration, ad-hoc surveys, Hospital records, Demographic profiles of the Indian Census.

Complete life table and its main features, Uses of life table. Makehams and Gompertz curves. National life tables. UN model life tables. Abridged life tables. Stable and stationary populations.

Measurement of Fertility: Crude birth rate, General fertility rate, Age specific birth rate, Total fertility rate, Gross reproduction rate, Net reproduction rate.

Measurement of Mortality: Crude death rate, Standardized death rates, Age-specific death rates, Infant Mortality rate, Death rate by cause.

Internal migration and its measurement, migration models, concept of international migration. Net migration. International and postcensal estimates. Projection method including logistic curve fitting. Decennial population census in India.

(iii) Survival Analysis and Clinical Trial:

Concept of time, order and random censoring, likelihood in the distributions – exponential, gamma, Weibull, lognormal, Pareto, Linear failure rate, inference for these distribution.

Life tables, failure rate, mean residual life and their elementary classes and their properties.

Estimation of survival function – actuarial estimator, Kaplan – Meier estimator, estimation under the assumption of IFR/DFR, tests of exponentiality against non-parametric classes, total time on test.

Two sample problem – Gehan test, log rank test.

Semi-parametric regression for failure rate – Cox's proportional hazards model with one and several covariates, rank test for the regression coefficient.

Competing risk model, parametric and non-parametric inference for this model.

Introduction to clinical trials: the need and ethics of clinical trials, bias and random error in clinical studies, conduct of clinical trials, overview of Phase I – IV trials, multicenter trials.

Data management: data definitions, case report forms, database design, data collection systems for good clinical practice.

Design of clinical trials: parallel vs. cross-over designs, cross-sectional vs. longitudinal designs, review of factorial designs, objectives and endpoints of clinical trials, design of Phase I trials, design of single-stage and multi-stage Phase II trials, design and monitoring of phase III trials with sequential stopping,

Reporting and analysis: analysis of categorical outcomes from Phase I – III trials, analysis of survival data from clinical trials.

(iv) Quality Control:

Statistical process and product control: Quality of a product, need for quality control, basic concept of process control, process capability and product control, general theory of control charts, causes of variation in quality,

control limits, sub grouping summary of out of control criteria, charts for attributes p chart, np chart, c-chart, V

chart, charts for variables: R, (X,R), (X, σ) charts.

Basic concepts of process monitoring and control; process capability and process optimization.

General theory and review of control charts for attribute and variable data; O.C. and A.R.L. of control charts; control by gauging; moving average and exponentially weighted moving average charts; Cu-Sum charts using V-masks and decision intervals; Economic design of X-bar chart.

Acceptance sampling plans for attributes inspection; single and double sampling plans and their properties; plans for inspection by variables for one-sided and two sided specification.

(v) Multivariate Analysis:

Multivariate normal distribution and its properties. Random sampling from multivariate normal distribution. Maximum likelihood estimators of parameters, distribution of sample mean vector.

Wishart matrix – its distribution and properties, distribution of sample generalized variance, null and non-null distribution of multiple correlation coefficients.

Hotelling's T² and its sampling distribution, application in test on mean vector for one and more multivariate normal population and also on equality of components of a mean vector in multivariate normal population.

Classification problem: Standards of good classification, procedure of classification based on multivariate normal distributions.

Principal components, dimension reduction, canonical variates and canonical correlation —definition, use, estimation and computation.

(vi) Design and Analysis of Experiments:

Analysis of variance for one way and two way classifications, Need for design of experiments, basic principle of experimental design (randomization, replication and local control), complete analysis and layout of completely randomized design, randomized block design and Latin square design, Missing plot technique. Split Plot Design and Strip Plot Design.

Factorial experiments and confounding in 2ⁿ and 3ⁿ experiments. Analysis of covariance. Analysis of non-orthogonal data. Analysis of missing data.

(vii) Computing with C and R:

Basics of C: Components of C language, structure of a C program, Data type, basic data types, Enumerated data types, Derived data types, variable declaration, Local, Global, Parametric variables, Assignment of Variables, Numeric, Character, Real and String constants, Arithmetic, Relation and Logical operators, Assignment operators, Increment and decrement operators, conditional operators, Bitwise operators, Type modifiers and expressions, writing and interpreting expressions, using expressions in statements. Basic input/output.

Control statements: conditional statements, if - else, nesting of if - else, else if ladder, switch statements, loops in c, for, while, do - while loops, break, continue, exit (), goto and label declarations, One dimensional two dimensional and multidimensional arrays. Storage classes: Automatic variables, External variables, Static variables, Scope and lifetime of declarations.

Functions: classification of functions, functions definition and declaration, assessing a function, return statement, parameter passing in functions. Pointers (concept only).

Structure: Definition and declaration; structure (initialization) comparison of structure variable; Array of structures: array within structures, structures within structures, passing structures to functions; Unions accessing a union member, union of structure, initialization of a union variable, uses of union. Introduction to linked list, linear linked list, insertion of a node in list, removal of a node from list.

Files in C: Defining and opening a file, input – output operation on a file, creating a file, reading a file. Statistics Methods and techniques in R.

APPENDIX-II

INSTRUCTIONS TO THE CANDIDATES FOR FILLING ONLINE APPLICATIONS

Candidates are required to apply Online using the website www.upsconline.nic.in

- Salient features of the system of Online Application Form are given hereunder:
- Detailed instructions for filling up Online applications are available on the above mentioned website.
- Candidates will be required to complete the Online Application Form containing two stages viz. Part-l and Part-II as per the instructions available in the above mentioned website through drop down menus.
- The candidates are required to pay a fee of Rs.200/- (Rupees Two Hundred only) [excepting SC/ST/Female/Physically Handicapped candidates who are exempted from payment of fee] either by depositing the money in any branch of SBI by cash, or by using net banking facility of State Bank of India/State Bank of Bikaner & Jaipur/State Bank of Hyderabad/State Bank of Mysore/State Bank of Patiala/State Bank of Travancore or by using any Visa/Master Credit/Debit Card.
- Before start filling up of Online Application, a candidate must have his/her photograph and signature duly scanned in the .jpg format in such a manner that each file should not exceed 40 KB and must not less than 3 KB in size for the photograph and 1 KB for the signature.
- The Online applications (Part I and II) can be filled from 16th January, 2016 to 12th February, 2016 till 11.59 p.m., after which link will be disabled.

- Applicants should avoid submitting multiple applications. However, if due to any unavoidable circumstances, any applicant submits multiple applications then he/ she must ensure that the applications with higher RID is complete in all respects.
- In case of multiple applications, the applications with higher RID shall be entertained by the Commission and fee paid against one RID shall not be adjusted against any other RID.
- The applicants must ensure that while filling their Application Form, they are providing their valid and active E-Mail IDs as the Commission may use electronic mode of communication while contacting them at different stages of examination process.
- The applicants are advised to check their emails at regular intervals and ensure that the e-mail address ending with monostruct is directed to their inbox folder and not to the SPAM folder or any other folder.
- Candidates are strongly advised to apply online well in time without waiting for the last date for submission of Online Applications.

APPENDIX III

Special instructions to Candidates for Conventional Type papers

1. Articles permitted inside Examination Hall

Battery-operated pocket calculators of "non-programmable" type only, mathematical/ engineering/drawing instruments, including a flat rule divided on the edges into inches and tens of an inch and into centimeters and millimeters, a slide rule, set squares, a protractors and a pair of compasses, pencils, coloured pencils, mapping pens, eraser, T-square and drawing board for use wherever necessary. Candidates are not allowed to bring with them any "Tables or Charts" for use in the Examination Hall

Mobile phones, pagers, bluetooth or any other communication devices are not allowed inside the premises where the examination is being conducted. Any infringement of these instructions shall entail disciplinary action including ban from future examinations.

Candidates are advised in their own interest not to bring any of the banned items including mobile phones/pagers/Bluetooth to the venue of the examination, as arrangements for safekeeping cannot be assured.

2. Tables to be supplied by UPSC

If it is considered necessary for answering the questions set in any paper, the Commission may supply any of the following for reference purpose only:-

- (i) Mathematical/Physical, Chemical and Engineering Tables (including Logarithmic Tables);
- (ii) Steam Table (including Mollier Diagrams for Temperature up to 800 ℃ and Pressure up to 500 Kgf/Cm);
- (iii) National Building Code of India 1970 or 1983 Group 2 Part VI;
- (iv) Any other special articles as may be necessary for the candidates to answer the questions set in the question paper. After conclusion of the examination, return the above items to the invigilator.

3. Answers to be written in own hand

Write the answers in your own hand in ink. Pencil may be used for maps, mathematical drawings or rough work.

4. Check Answer Book

The candidate must write his/her roll number (and not his/her name) only in the space provided for the purpose on every answer book used by him/her. Before writing in the answer book, please see that it is complete. In case there are any missing pages, it should be got replaced.

Do not tear out any pages from the Answer Book. If you use more than one Answer Book, indicate on the cover of first Answer Book the total number of Answer Books used. Do not leave any blank, unused spaces between answers. If such spaces are left, score them out.

5. Answers in excess of prescribed number will be ignored

The candidate must attempt questions strictly in accordance with the directions given on each question paper. If questions are attempted in excess of the prescribed number shall be valued and the remaining answers will be ignored.

6. Questions relating to graph/précis should be attempted only on graph/précis sheets to be supplied on demand by the invigilators. All loose sheets such as précis sheet, drawing papers, graph sheets etc. whether used or not, should be placed inside the answer books and fastened along with the additional answer book(s), if any. Candidates who fail to observe this instruction will be penallised. Do not write your roll number on these sheets.

7. Unfair means strictly prohibited

Do not copy from the papers of any other candidates nor allow your papers to be copied nor give nor attempt to give nor obtain nor attempt to obtain irregular assistance of any description. It will be responsibility of every candidate to ensure that his/her answers are not copied by another candidate. Failure to do so will invite penalty, as may be awarded by the Commission for adoption of unfair means.

8. Conduct in Examination Hall

Do not misbehave in any manner or create disorderly scene in the examination hall or harass or bodily harm the staff deployed for the conduct of examination. You will be severely penalized if you attempt to do so.

9. Please read carefully and abide by the instructions printed on the Question Paper and on the Answer Book supplied in the Examination Hall.

Appendix IV

Special Instruction to candidates for objective type tests

1. Articles permitted inside Examination Hall

Clip board or hard board (on which nothing is written), a good quality black ball pen for making responses on the Answer Sheet. Answer Sheet and sheet for rough work will be supplied by the invigilator.

2. Articles not permitted inside Examination Hall

Do not bring into the Examination Hall any article other than those specified above e.g. books, notes, loose sheets, electronic or any other type of calculators, mathematical and drawing instruments, Log Tables, stencils of maps, slide rules, Test Booklets, rough sheets pertaining to earlier session(s), etc.

Mobile phones, pagers, bluetooth or any other communication devices are not allowed inside the premises where the examination is being conducted. Any infringement of these instructions shall entail disciplinary action including ban from future examinations. Candidates are advised in their own interest not to bring any of the banned items including mobile phones, pagers to the venue of the examination, as arrangements for safekeeping cannot be assured.

- 3. Penalty for wrong Answers (in Objective Type Papers)
 - THERE WILL BE PENALTY (NEGATIVE MARKING) FOR WRONG ANSWERS MARKED BYA CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.
- (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, one third (0.33) of the marks assigned to that question will be deducted as penalty.
- (ii) If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happens to be correct and there will be same penalty as above for that question.
- (iii) If a question is left blank i.e. no answer is given by the candidate, there will be no penalty for that question.

4. Unfair means strictly prohibited

No candidates shall copy from the papers of any other candidate nor permit his papers to be copied nor give nor attempt to give not obtain nor attempt to obtain irregular assistance of any description.

5. Conduct in Examination Hall

No candidates should misbehave in any manner or create disorderly scene in the Examination Hall or harass the staff employed by the Commission for the conduct of the examination. Any such misconduct will be severely penalised.

5. Answer Sheet Particulars

- (i) Write in black ball pen your Centre and subject followed by Test Booklet series (in bracket), subject code and roll number at the appropriate space provided on the Answer Sheet at the top. Also encode your booklet series (A, B, C or D as the case may be), subject code and roll number with black ball pen in the circles provided for the purpose in the Answer Sheet. The guidelines for writing the above particulars and encoding the above particulars are given in Annexure. In case the booklet series is not printed on the Test Booklet or Answer Sheet is unnumbered, please report immediately to the invigilator and get the Test Booklet/Answer Sheet replaced.
- (ii) Candidates should note that any omission/mistake/discrepancy in encoding/filling of details in the OMR answer sheet, especially with regard to Roll Number and Test Booklet Series Code, will render the answer sheet liable for rejection.
- (iii) Immediately after commencement of the examination please check that the Test Booklet supplied to you does not have any unprinted or torn or missing pages or items etc. If so, get it replaced by a complete Test Booklet of the same series and subject.
- 6. Do not write your name or anything other than the specific items of information asked for, on the Answer Sheet/Test Booklet/sheet for rough work.
- 8. Do not fold or mutilate or damage or put any extraneous marking in the Answer Sheet. Do not write anything on the reverse of the Answer Sheet.
- 9. Since the Answer Sheets will be evaluated on computerised machines, candidates should exercise due care in handling and filling up the Answer Sheets. They should use black ball pen only to darken the circles. For writing in boxes, they should use black ball pen. Since the entries made by the candidates by darkening the circles will be taken into account while evaluating the Answer Sheet on computerised machines, they should make these entries very carefully and accurately. The candidate must mark responses in the Answer Sheet with good quality black ball pen.

10. Method of marking answers

In the "OBJECTIVE TYPE" of examination, you do not write the answers. For each question (hereinafter referred to as "Item") several suggested answers (hereinafter referred to as "Responses") are given. You have to choose one response to each item. The question paper will be in the Form of TEST BOOKLET. The booklet will contain item bearing numbers 1, 2, 3 etc. Under each item, Responses marked (a), (b), (c), (d) will be given. Your task will be to choose the correct response. If you think there is more than one correct response, then choose what you consider the best response.

In any case, for each item you are to select only one response. If you select more than one response, your response will be considered wrong. In the Answer Sheet, Serial Nos. from 1 to 160 are printed. Against each numbers, there are circles marked (a), (b), (c) and (d). After you have read each item in the Test Booklet and decided which one of the given responses is correct or the best, you have to mark your response by completely blackening to indicate your response.

Ink pen or pencil should not be used for blackening the circle on the Answer Sheet.

For example, if the correct answer to item 1 is (b), then the circle containing the letter (b) is to be completely blackened with black ball pen as shown below:

Example : (a) • (c) (d)

11. Entries in Scannable Attendance List

Candidates are required to fill in the relevant particulars with black ball pen only against their columns in the Scannable Attendance List, as given below:

- i) Blacken the circle (P) under the column (Present/Absent)
- ii) Blacken the relevant circle for Test Booklet Series iii) Write Test Booklet Serial No.
- iv) Write the Answer Sheet serial No. and also blacken the corresponding circles below

- v) Append signature in the relevant column
- 12. Please read and abide by the instructions on the cover of Test Booklet. If any candidate indulges in disorderly or improper conduct, he will render himself liable for disciplinary action and/or imposition of a penalty as the Commission may deem fit.
- 13. The candidates are not allowed to leave the Examination Hall before the expiry of prescribed time period of the examination.

Annexure

How to fill in the Answer Sheet of objective type tests in the Examination Hall

Please follow these instructions very carefully. You may note that since the Answer Sheets are to be evaluated on machine, any violation of these instructions may result in reduction of your score for which you would yourself be responsible.

Before you mark your responses on the Answer Sheet, you will have to fill in various particulars in it.

As soon as the candidate receives the Answer Sheet, he/she should check that it is numbered at the bottom. If it is found unnumbered he/she should at once get it replaced by a numbered one.

You will see from the Answer Sheet that you will have to fill in the top line, which reads thus:

केंद्र	विषय	विषय कोड	अनक्रमांक	
Centre	Subject	S. Code	Roll Number	

If you are, say, appearing for the examination in Delhi Centre for the General Studies Paper and your Roll No. is 081276 and your Test Booklet series is 'A', you should fill in thus, using ball pen.

^{*} This is just illustrative and may not be relevant to the Examination concerned.

केंद्र	विषय	विषय कोड		अनक्रमांक						
			9 9		0	8	1	2	7	6
Centre	Subject	S. Code		Roll Number						ш

You should write with black ball pen the name of the centre and subject in English or Hindi. The test Booklet Series is indicated by Alphabets A, B, C or D at the top right hand corner of the Booklet.

Write your Roll Numbers exactly as it is in your **e-Admit Card** in the boxes provided for this purpose. Do not omit any zero(s) which may be there.

The next step is to find out the appropriate subject code from the Time Table. Now encode the Test Booklet Series, Subject Code and the Roll Number in the circles provided for this purpose. Do the encoding with black pen. The name of the Centre need not be encoded.

Writing and encoding of Test Booklet Series is to be done after receiving the Test Booklet and confirming the Booklet Series from the same.

For General Ability subject paper of 'A' Test Booklet Series you have to encode the subject code, which is 99. Do it thus.

पुस्तिका क्रम	विषय कोड
Booklet Series (A)	Subject Code 9 9
B C D	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c
	88

All that is required is to blacken completely the circle marked 'A' below the Booklet Series and below the subject code blacken completely the Circles for '9' (in the first vertical column) and '9' (in the second vertical column). You should then encode the Roll No. 081276. Do it thus similarly.

अनुक्रमांक

Roll Numbers

	Roll Numbers									
	0	8	}	1		2		7		6
		0) (0	(0	(0	(0
(1	1) ((1	(1	(1	\bigcirc
(2	2) (2			(2	\langle	2)
(3	3	(3	(3)	(3)	\langle	3)
(4	4) (4	(4)	(4	\langle	4)
(5	5) (5	(5	(5)	(5
(6	6	(6	(6	\langle	6)	•	D
(7	7	(7	(7)	•		(7)
(8		(8	(8	(8)	\langle	8
(9	9	(9	(9)	\langle	9)	\langle	9)

Important: Please ensure that you have have carefully encoded your subject, Test Booklet Series and Roll Number.

 $[\]mbox{\ensuremath{\mbox{\scriptsize *}}}$ This is just illustrative and may not be relevant to your Examination.