These sample papers are for indicative purpose only. The pattern may change without prior notice. Candidates are expected to have knowledge of the relevant and related discipline at the Masters level.

Indian Institute of Technology Guwahati
Department of Humanities and Social sciences

PHD Entrance Test
Sub: ARCHAEOLOGY

Total Points: 50

Time: 2Hrs

Answer ANY TWO of the following. All questions carry equal marks

1) Write an essay on the history and development of Indian Archaeology?

2) Give definitions of Archaeology. Write about the aims, objectives and nature of Archaeology.

3) Write an essay on the exploration and excavation methods in Archaeology?

4) Who coined the term "Neolithic revolution"? Describe the main characteristic features of the Neolithic of Northeastern India.

4) Write an essay on relative and absolute dating methods.

5) What is ethno-archaeology? Write in detail about ethno-archeology in India?

6) What is "New Archaeology" and its main features?

7) What is Post-Processual Archaeology? How is it different from traditional Archaeology and new Archaeology?

8) Write an essay on the Indian Megalithic culture?

9) Write Short notes on (10 marks each): Robert Bruce Foote, H D Shankalia, John Marshal, Alexander Cunningham, Lahuradeva, DeTerra and Patterson, Inamgaon, Mesolithic period, Daojali Hading, Hoabinhian Culture,

Spirit Cave, Cord marked Pottery.

10) Write an essay on Culture Resource Management (CRM)?

Indian Institute of Technology Guwahati
Department of Humanities and Social sciences

PHD Entrance Test
Sub: Development Studies
Total Points: 50

Time: 2 Hrs

1. Discuss the issues raised by the various movements against hydropower projects across India, and the model of development that they put forward.**(25)**

2. Discuss the background of the Green Revolution. What are the benefits and costs of Green Revolution?**(5 +20)**

Indian Institute of Technology Guwahati
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PHD Entrance Test
Sub: Economics

Broad Syllabus for Written Test:

Mathematics: Limit and Continuity, Optimization, Linear Algebra

Statistics: Descriptive Statistics, Probability, Regression Analysis.

Micro: Consumer Behaviour, Producer Behaviour, Markets.

Macro: Simple Keynesian Model, IS-LM model, Monetary and Fiscal policies

Development Economics: Growth models, Inequality, Poverty, Migration, Population.

Indian Economy: Relevant Topics

A sample paper is attached below. It is only for indicative purpose. You can use non programmable calculator during the exam.

Total Points: 40

Time: 2 Hrs

There are Three Parts in the Examination. <u>Completion of Part C is compulsory</u>. Part A is to be done in one answer script. Use a different script for Parts B and C.

Part A

1   The market demand curve is given by $p = a - bQ$, where p, Q have usual interpretations. There are two firms in the market, each having a constant marginal cost of 'c' per unit. If the quantities produced by each firm are q_1 and q_2, then $Q = q_1 + q_2$.
Assume these firms practice Cournot competition. What are the equilibrium price and quantity produced by each firm?

[5]

2 Consider the IS-LM model. Instead of the exogenous money supply, suppose the Central Bank follows a rule: money supply is increasing with interest rate. Show that compared to the exogenous money supply case, the LM curve will be flatter and fiscal policy more effective.

[5]

3 Explain the concept of 'balanced budget multiplier' in the context of simple Keynesian model.

[5]

4 A particular linear regression ('units' = α +β * 'minutes') yields the following result:

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. reg  units minutes
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Source	SS	df	MS		Number of obs =	14
					F(1, 12) =	943.20
Model	112.567841	1	112.567841		Prob > F =	0.0000
Residual	1.43215942	12	.119346618		R-squared =	0.9874
					Adj R-squared =	0.9864
Total	114	13	8.76923077		Root MSE =	.34547

units	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
minutes	.0636696	.0020731	30.71	0.000	.0591526	.0681866
_cons	-.189594	.221682	-0.86	0.409	-.6725976	.2934096

(a) Which coefficients are statistically significant and why?
(b) What is the interpretation of P value?
(c) What is the significance of the 95% confidence interval?
(d) Comment on the F statistic as reported on the top right corner.

[2 +3+2+3 =10]

Part B

5 What is Kuznet's hypothesis on inequality? Discuss the conceptual merits and limitations of the hypothesis for present day developing countries.

[15]

Part C

(Not Graded, but Compulsory)

1. Briefly (*10 sentences max*) identify your research topic(s) and why are you interested in those.

Indian Institute of Technology Guwahati
Department of Humanities and Social sciences

PHD Entrance Test
Sub: English
Total Points: 50

Time: 2 Hrs

All questions carry equal marks. Answer any *two* of the following questions:

1. Attempt a critical assessment of any two schools of literary theory.

2. Examine the significance of Indian Writing in English in contemporary literary and academic fields. Your answer must be in the context, and should incorporate discussion, of the works of any one significant writer of your choice.

3. Write a comprehensive and critical note on any one of the following topics. Your note must trace the historical trajectories, the several authors and their important works associated with the genres and the influences of these on contemporary and subsequent period/s of literature.
   a. Elizabethan Drama
   b. Romantic Poetry
   c. Victorian Novel
   d. Absurd Drama

Indian Institute of Technology Guwahati
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PHD Entrance Test
Sub: History
Total Points: 50

Time: 2 Hrs

{Answers should be written within 750 words.}

Section 1 (Compulsory)

1. Write a short essay on your research interests for a Ph.D degree.

Section 2 (Write any one)

2. The historian's craft involves "a continuous process of interaction between the historian and his facts, an unending dialogue between the present and the past". Elaborate on this statement.

3. To what extent can you describe history as fiction?

4. Can visual artefacts become sources of writing history? Give examples from your chosen area of research.

5. Do you think historians will benefit from insights drawn from other disciplines? Discuss with reference to any one.

6. Discuss the ways in which Bombay cinema has contributed to the idea of an Indian nation.

7. Discuss some major historiographical trends of recent times which have significantly redefined our understanding of history.

8. Is it possible that new environmental histories have complicated our understanding of Indian history?

9. Discuss any relevant source in Indian languages which might be important for your chosen area of research.

Indian Institute of Technology Guwahati
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PHD Entrance Test
Sub: Linguistics

Total Points: 50

Time: 2 Hrs

1. Briefly describe language contact phenomenon, emphasize on the most notable outcomes of such contact. Point out some interesting features of language contact in India and why they are different.
        4+4

2. What is a creole? Differentiate between pidgins and creoles. How does innateness hypothesis find a support in the development of creoles?
        2+2+4

3. Describe complementary and contrastive distribution of sounds. How can they help in determining phonemes and allophones? Explain with examples.
        3

4. How do formants help in determining vowel quality? Explain with examples.   3

5. Please write the IPA symbols for the following descriptions:
a. Voiceless, alveolar, stop b. voiced, labio-dental, fricative c. high, back, rounded vowel
d. Voiceless, glottal, fricative   4

6. Draw two constituent trees demonstrating the ambiguity in the sentence "Megha saw the elephant with a telescope".   4

7. Write short notes on:
a) Speech perception b) Tone languages   2 x 2 = 4

8. What are the consonant sounds of English which fall in the following natural classes? Provide appropriate symbols.   3
    a) [+sonorant]
    b) [+continuant]
    d) [+coronal]

9. Draw the syllable structure of the following two words: 3
    i)   a) balcony   b) constant
    ii)   Show whether the two words obey the principles of a) Onset Maximization and
        b)Sonority sequencing   2

10. Explain with two relevant examples from Sapir (1933) which clearly show the 'psychological reality of phonemes'.   3

11. Draw a diagram of the vocal tract and show all the places of articulation   2

12. Assume a language with the following consonant system, and give the minimum feature specification (common features) of the sets of consonants listed in (a) through (c).   3

$$\text{p}\qquad \text{p}^{h}\ \text{t}\ \text{t}^{h}\qquad \text{k}\ \text{k}^{h}$$
$$\text{b}\qquad \text{d}\qquad\qquad \text{g}$$
$$\qquad\qquad\qquad\qquad \text{s}$$
$$\text{m}\qquad\qquad\qquad \text{n}$$
$$\text{w}\qquad\qquad\qquad \text{l}\qquad \text{r}$$

  a) {p t k}
  b) {p p^h t t^h k k^h s}
  c) {m n l r w}

Indian Institute of Technology Guwahati
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PHD Entrance Test
Sub: Philosophy
Total Points: 50

Time: 2 Hrs

(Answer Group A and Group B in two separate answer scripts)

GROUP A (answer any 2 questions from Group A)　　　　　　　**Marks: 30**

1. Write a note on Plato's theory of knowledge with special emphasis on the doctrine of Forms and the Allegory of the Cave.

2. Critically examine Cartesian position on 'cogito ergo sum' with reference to the Method of Doubt. Write a critical note on Cartesian dualism or the philosophy of Mind-Body interactionism. How is mind related to the body?

3. Write short notes on any two of the following:

(a) Distinction between *phenomena* and *noumena* in the philosophy of *Immanuel Kant*
(b)Phenomenology of Edmund Husserl
(c) Existentialism of Jean Paul Sartre .

GROUP B

Marks: 20

I.   Answer the following:

1. If "No flowers in the park are fragrant flowers" is false, write and find out the truth value of the other propositions.
2. Check the validity of the following:
   A. Some popular policies are not welfare-centered policies because All growth-oriented policies are welfare-centered policies and Some popular policies are not growth-oriented policies.
   B. All transgenic animals are manmade and hence they are patentable.

II.See if the following arguments are sound. Justify your answer. (max. 10 lines for each answer)

1. I believe in the Bible because it is the written word of God through his prophets. Obviously, God would not lie to his prophets. After all, the Bible says so.

2. There's no reason to take seriously Nietzsche's ideas about the Superman. Weak and sickly all his short life, of course he found this concept captivating.

III.Match the following (Write answers in the question paper)

S. No.			Answers
1	Noumena	Madhwa	
2	Qualified monism	Jaimini	
3	Nirvana	Kant	
4	Empiricist	Ramanuja	
5	Prakrti	J. Krishnamurthy	
6	Mimamsa	Locke	
7	Monads	Spinoza	
8	Being-in-itself	Kanada	

11

9	*Crito*	Sankhya	
10	Ontological argument	Buddhism	
11	The first and last freedom	Aristotle	
12	Dasein	Heidegger	
		Sartre	
		Socrates	
		Leibnitz	
		Hume	
		Anselm	
		DayaKrishna	

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PHD Entrance Test
Sub: Political Science

Total Score: 40

Total Time: 2 Hrs

Answer any TWO

Q1.*Some International Relations (IR) scholars argue that constructivism not only adds new and meaningful interpretations of international politics but also challenges neorealism and neoliberalism. Critically discuss these debates.* (20 Marks)

Q.2*'Language policy of India has been a major test of Indian federalism'. Critically assess the evolution, nature and challenges of Indian federalism in the light of the above statement.* (20 Marks)

Q.3. *Discuss some of the theories that have been used to analyze the persistence of India's democracy?* (20 Marks)

Indian Institute of Technology Guwahati
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PHD Entrance Test,
Sub: Psychology

Total Score: 50

Total Time: 2 Hrs

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1) How scientific knowledge derived from research in Psychology can be used for finding practical solutions of daily life? Give appropriate realistic examples tosupport your answer.

[**15**]

2) Write a brief research proposal considering following requirements:

[**20**]

        a) At least one Independent variable and one dependent variable
        b) It should have clear objective
        c) Rationale for objective
        d) Research Design
        e) Tools (which are required to conduct the research)
        f) Sample
        g) Possible contribution of the research

Multiple-choice questions   **(1x15=15)**

1.   An operant conditioning procedure that involves the positive reinforcement of successive approximations of an initially improbable behavior to eventually bring about that behavior is   known as:
        a) Shaping   b) Secondary Reinforcer
        c) Primary Reinforcer   d) Discriminative Stimulus

2.   The sensory memory, known as _____ memory, stores auditory information lasting up to   4 or more seconds
        a) Iconic   b) Echoic
        c) Tactile   d) Random Access

3. A child who has a balloon burst in his face squints whenever he blows up a balloon. The first time the child saw an expanding balloon it served as a(n) _____ and the second time it was a(n) _____.
Which of the following options most accurately fits the spaces?
a) UCR; CR   b) CS; UCS
c) UCR; Neutral Stimulus   d) Neutral Stimulus; CS

4. To determine whether results are statistically significant, what might the experimenter do?
a) Examines the performance of the control group
b) Constructs a scatterplot
c) Calculates the likelihood that the difference in mean scores was caused by chance
d) Repeats the experiment

5. If the results of an experiment are statistically significant, what may we conclude?
a) Experiment was important
b) Results were probably not due to chance
c) Dependent variable had an effect on the independent variable
d) Operational definitions were reliable

6. Which one of the following statements about fissures and gyri is true?
a) Are pathways for cerebrospinal fluid
b) Separate the brain from the skull
c) Increase the surface area of the brain
d) Line the ventricles

7. Lateralisation of function refers to the fact that the two sides of the brain do which of the following?
a) Do not perform identical functions
b) Perform identical functions
c) Receive information from the opposite side of the body
d) Operate independently

8. A stimulus with a value of 1 jnd is just above which of the following?
a) Absolute threshold   b) Response bias
c) Receiver-operating characteristic d) Difference threshold

9. You have recently moved house and are experiencing great difficulty in learning your new telephone number. Every time you try to remember your new number, you think of your old one instead. This is an example of what?
a) Cognitive dissonance   b) Proactive Interference
c) Displacement   d) Retroactive Interference

10. Emma goes to the gym most days and she believes that a majority of her peers also exercise regularly, although this is not actually the case. What is the error called that Emma is committing?

a) Actor-observer effect

b) False consensus

c) Attributional bias

d) Self-serving bias

11. The first time Rosa visited a friend's home, they walked around his vegetable garden and she noted the many varieties of tomatoes he grew. She was surprised to learn later that he did not like to eat fresh tomatoes. Her surprise was the result of which of the following?

a) Representativeness heuristic

b) Base-rate fallacy

c) Availability heuristic

d) False consensus

12. Which of the following statements about emotions is true?

a) Always occur immediately after the stimuli that elicit them

b) Do not occur spontaneously

c) Are independent of cognitive processes

d) Are elicited by neutral stimuli

13. When faced with the prisoner's dilemma, the best joint outcome is which of the following?

a) Neither suspect A or B to confess

b) Suspect A (but not suspect B) to confess

c) Suspects A and B both to confess

d) Suspect B (but not suspect A) to confess

14. What are the implications of inferring causality from a correlation?

a) Dangerous, as the correlation may be spurious

b) There is no way of inferring the direction of causality from a correlation alone. Other factors must be considered.

c) Two (or more) variables may correlate either positively or negatively, this does not imply causality.

d) All of the above.

15. What is a common way of controlling extraneous variables in an experiment?

a) Random assignment

b) Double-blind procedure

c) Single-blind procedure

d) Using animal subjects

Indian Institute of Technology Guwahati
Department of Humanities and Social sciences

PHD Entrance Test
Sub: Sociology
Total Points: 50

Time: 2 Hrs

1. Write an outline of a research proposal that you wish to take up for your PhD work, setting out clearly the major objectives and methodology.

   [10 marks]

2. Merton's middle-range theories are reconciliation between minor working hypotheses and major conceptual schemes.

   [20 marks]

3. "The history of all hitherto existing society is the history of class struggles." Elucidate.

   [20 marks]