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TEST BOOKLET
GENERAL STUDIES
PAPER - II

Test Time Allowed : (02:00PM to 04:00PM) 2 Hours

Maximum Marks : 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED. BY A COMPLETE TEST BOOKLET.
2. **Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/ discrepancy will render the Answer Sheet liable for rejection.**
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. DO NOT write anything else on the Test Booklet.
4. This Test Booklet contains **80 items** (questions). Each item is printed in **English**. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark 'all your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. **All items carry equal marks.**
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the Invigilator only the Answer Sheet. You are permitted to take this Test Booklet with you.
9. Sheets for rough work are appended in the Test Booklet at the end.
10. **Penalty for wrong answers :**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN ALL THE QUESTIONS.
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer is given by the candidate, one-third 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 to 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.

UPSC - CSAT - QUESTION PAPER

Read the following passages and answer the items that follow the passages. Your answers to these items should be based on the passages only :

Passage:1

Scientific meetings, or conferences, are where researchers with similar or aligned areas of interest gather and serve as important avenues for the discussion and dissemination of science. These meetings often include presentations or talks on contemporary research findings, along with expert interactions on topics of science and professional development. Across the international scientific ecosystem, several academic conferences or meetings are organised every year, often by scientific societies, research institutes, universities, and organisations. The standard academic meeting model involves a core group of organisers or a scientific society responsible for a range of tasks, that include planning the meeting programme, inviting experts, disseminating the meeting information to researchers in the field, and raising and allocating funds for the event.

1. In the context of international scientific conferences, what role do academic conferences play in the broader scientific ecosystem?

- (a) Facilitating expert interactions on science and professional development
- (b) Serving as important avenues for the discussion and dissemination of science
- (c) Organizing meetings every year by scientific societies, research

institutes, universities, and organizations

(d) All of the above

Passage:2

Land is central to all human activities. It provides ecological, economic, social, and cultural services. But this multi-dimensional character of land is often overlooked in land management practices, resulting in excessive stress, land degradation, and environmental draw down. Globally, the annual losses of ecosystem services due to land degradation has been estimated at \$6 trillion. The United Nations Convention to Combat Desertification (COP14) in New Delhi in 2019 specifically discussed the problem of land degradation experienced by different countries and the need to find ways of achieving land degradation neutrality. The Intergovernmental Panel on Climate Change's special report on 'Climate Change and Land' (2019) suggested country-level stocktaking of land management practices. It also proposed several near- and long-term actions with the thrust on land management options that reduce competition for land with co-benefits and minimum negative impacts on key ecosystem services.

2. What role did the United Nations Convention to Combat Desertification (COP14) play in addressing the challenges of land degradation, as mentioned in the paragraph?

- 1. Highlighted the multi-dimensional character of land.
- 2. Discussed the problem of land degradation experienced by different

countries.

3. Emphasized the need to find ways of achieving land degradation neutrality.
4. Proposed country-level stocktaking of land management practices.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 and 4 only
- (d) 1, 2, and 4 only

3. How did the annual losses of ecosystem services due to land degradation, estimated at \$6 trillion globally, influence international discussions and actions on land management practices, according to the information provided?

1. Prompted the establishment of the Intergovernmental Panel on Climate Change (IPCC).
2. Became a key agenda at the United Nations Convention on Biological Diversity.
3. Reinforced the importance of achieving land degradation neutrality.
4. Resulted in a decline in international cooperation on environmental issues.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 2 and 4 only

Passage:3

At the Indo-Australian bilateral talks opening in Canberra to-morrow the two delegations will discuss the possibilities of joint scientific research on the utilisation of solar energy for generating electric power as a substitute for fossil fuels like coal and oil now in extensive use all over the world. In the wake of the current oil crisis, Australia has asked India to include in its delegation to these talks a top scientist well acquainted with the complex technical problems involved in harnessing solar energy for industrial uses, so that a proper feasibility study can be made of what the two countries could jointly do for transforming this concept from the realm of science action into a practical proposition.

4. In the context of the Indo-Australian bilateral talks on solar energy, assess the accuracy of the following statements:

1. The talks are a direct response to the current oil crisis impacting global energy dynamics.
2. Australia's request for a top scientist in India's delegation indicates a recognition of the intricate technical challenges involved in harnessing solar energy for industrial use.
3. The primary focus of the discussions is to explore solar energy as a viable substitute for widely used fossil fuels.
4. The collaborative efforts aim to transform the theoretical concept of solar energy into a practical proposition through a thorough feasibility study.

- (a) 1,2,3 & 4
- (b) 1,2 & 3 only
- (c) 2 & 4
- (d) 3 only

Passage:4

Bitcoin halving refers to the 50% reduction in the reward paid to Bitcoin miners who successfully process other people's cryptocurrency transactions so that they can be added to the public digital ledger known as the blockchain. In order to "grow" Bitcoin's blockchain and keep the ecosystem running, Bitcoin miners rely on advanced computer equipment to solve a complex mathematical puzzle through a process known as 'Proof of work.' This intense activity is the reason Bitcoin transactions result in huge carbon footprints and require vast amount of electricity. No real mining is carried out. The Bitcoin miners with cutting-edge computer equipment, working on an industrial scale, are most likely to solve the puzzle first and claim their prize, which is currently set at 6.25 Bitcoin (BTC).

5. According to the information in the passage about Bitcoin halving and the environmental impact of mining, which one of the following statements best reflects what is implied?

- (a) Bitcoin miners engage in traditional mining activities to extract new bitcoins from the ground.
- (b) The carbon footprint and electricity consumption associated with Bitcoin transactions are consequences of the mining process.

(c) Proof of work is a simple and straightforward process that requires minimal computational power.

(d) The environmental impact of Bitcoin mining is negligible compared to traditional financial transactions.

6. Evaluate the implication of the following viewpoint about Bitcoin miners and the payout scheme in the passage:

(a) The reward system encourages a sustainable and eco-friendly approach to Bitcoin mining.

(b) Bitcoin miners utilize cutting-edge computer equipment on an industrial scale to maximize their chances of claiming rewards.

(c) The process of solving complex mathematical puzzles in Bitcoin mining is primarily aimed at reducing carbon footprints.

(d) Bitcoin miners are motivated by altruistic reasons rather than the pursuit of financial rewards.

Passage:5

Researchers have developed an India-specific artificial intelligence model to precisely determine the gestational age of a foetus in the second and third trimester of pregnancy. The model has been designed by researchers at the Indian Institute of Technology-Madras and the Translational Health Science and Technology Institute, Faridabad. It is part of an interdisciplinary group for advanced research on birth outcomes — DBT India initiative (GARBH-

Ini) programme. The Garbhini-GA2 is the first late-trimester GA estimation model to be developed and validated using Indian population data. Currently models used for Western population are in use which could prove erroneous when applied in the later part of pregnancy due to variations in the growth of the foetus in the Indian population, the researchers say.

7. Which one of the following statements best reflects the most logical and rational message conveyed by the author of the passage?

- (a) The Garbhini-GA2 model is solely designed for late-trimester gestational age estimation in Western populations.
- (b) Researchers at the Indian Institute of Technology-Madras have developed the Garbhini-GA2 model as part of the DBT India initiative.
- (c) Current gestational age estimation models used in the Western population are universally applicable and accurate throughout pregnancy.
- (d) The interdisciplinary research group, GARBH-Ini, aims to validate the Garbhini-GA2 model for gestational age determination in the first trimester.

8. Find the passage's inferred viewpoint on the importance of the Garbhini-GA2 model:

- (a) The Garbhini-GA2 model is primarily designed for early-trimester gestational age

estimation.

- (b) Existing gestational age estimation models for Western populations are equally effective in the later stages of pregnancy for the Indian population.
- (c) The development of Garbhini-GA2 is crucial to address potential errors in gestational age estimation during the later stages of pregnancy in the Indian population.
- (d) The GARBH-Ini program primarily focuses on interdisciplinary research unrelated to gestational age determination.

Passage:6

Striped marlin are some of the fastest animals on the planet and one of the ocean's top predators. When hunting in groups, individual marlin will take turns attacking schools of prey fish one at a time. Now a new study (Current Biology) explains how they might coordinate this turn-taking style of attack on their prey to avoid injuring each other. The key is rapid colour changes. Studying the way rapid colour change as groups of marlin hunted schools of sardines, the authors found that the attacking marlin 'lit up' and became far brighter than others as it made its attack and the colour rapidly returned to its 'non-bright' colouration after the attack. The researchers used drones to study this phenomenon.

9. Which one of the following statements best reflects the crucial message conveyed by the author of the passage?
- (a) The study in Current Biology suggests that individual marlin coordinate turn-taking attacks through rapid color changes to prevent mutual injuries.
 - (b) Striped marlin's rapid color changes are primarily a result of their excitement during group hunting activities.
 - (c) Striped marlin's hunting strategy involves synchronized attacks on prey schools, regardless of the potential for injuring each other.
 - (d) The use of drones in the study demonstrates that marlin's color changes are unrelated to their hunting behavior and coordination.
10. Assess the implied perspective in the passage regarding the role of rapid color changes in striped marlin's hunting strategy:
- (a) Rapid color changes in marlin are accidental and unrelated to their coordinated turn-taking attacks during group hunting.
 - (b) The study in Current Biology emphasizes that marlin's color changes are not essential for avoiding injuries during turn-taking attacks.
 - (c) Striped marlin's hunting strategy relies on maintaining a consistent and bright coloration throughout the group attack.
 - (d) The brightness of attacking marlin during hunting serves as a signal to the rest of the group to join the attack.
11. The difference between simple and compound interest on a certain sum of money for 2 years at 15% per annum is Rs.90. Find the sum:
- (a) ₹4500
 - (b) ₹4000
 - (c) ₹3500
 - (d) ₹3000
12. The compound interest on rs.30000 at 7% per annum is Rs.4347. The period is
- (a) 1 year
 - (b) 2 years
 - (c) 3 years
 - (d) 2.5 years
13. A sum of money at simple interest doubles in 10 years. In how many years, at the same rate, will it be tripled?
- (a) 30 years
 - (b) 25 years
 - (c) 20 years
 - (d) 15 years
14. Mr. Thomas invested an amount of Rs. 13,900 divided in two different schemes A and B at the simple interest rate of 14% p.a. and 11% p.a. respectively. If the total amount of simple interest earned in 2 years be Rs. 3508, what was the amount invested in Scheme B?
- (a) Rs. 6400
 - (b) Rs. 6500
 - (c) Rs. 7200
 - (d) Rs. 7500

15. A certain amount earns simple interest of Rs. 1750 after 7 years. Had the interest been 2% more, how much more interest would it have earned?
- (a) Rs. 35
(b) Rs. 245
(c) Rs. 350
(d) Cannot be determined
16. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:
- (a) Rs. 120
(b) Rs. 121
(c) Rs. 122
(d) Rs. 123
17. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Re. 1. The sum (in Rs.) is:
- (a) 625
(b) 630
(c) 640
(d) 650
18. The least number of complete years in which a sum of money put out at 20% compound interest will be more than doubled is:
- (a) 3
(b) 4
(c) 5
(d) 6
19. The difference between compound interest and simple interest on an amount of Rs. 15,000 for 2 years is Rs. 96. What is the rate of interest per annum?
- (a) 8
(b) 10
(c) 12
(d) Cannot be determined
20. The compound interest on a certain sum for 2 years at 10% per annum is Rs. 525. The simple interest on the same sum for double the time at half the rate percent per annum is:
- (a) Rs. 400
(b) Rs. 500
(c) Rs. 600
(d) Rs. 800
21. In a certain code language, 'EAST' is written as 'DTUZ' and 'DOSE' is written as 'DENT'. How will 'FUEL' be written as in that language?
- (a) DGMT
(b) DMTG
(c) GTMD
(d) More than one of the above
22. In a certain code language, 'EMPTY' is written as AVROG and 'PUSH' is written as JUWR. How will 'ASPIRE' be written in that language?
- (a) GTKSUD
(b) CTKURG
(c) GTLRVC
(d) GTKRUC

UPSC - CSAT - QUESTION PAPER

23. If PIPE is written as 169165, then what is the last digit of SWAN?
- (a) 5
(b) 6
(c) 4
(d) 3
24. In a certain code language, 'CROWD' is coded as 23415924 and 'TRHICK' is coded as 162491997. How will 'FRUGAL' be coded in that language?
- (a) 1221021186
(b) 1226761821
(c) 1521012291
(d) 1512021921
25. In a certain code language, 6219 means 'Sachin is a cricketer' and 2646 means 'He played from Mumbai'. Which of the following is the code for 'Mumbai is very famous'?
- (a) 7945
(b) 2458
(c) 6246
(d) 6285
26. If in a certain language, E is coded as 2, H is coded as 1, N is coded as 7, P is coded as 5, A is coded as 0, T is coded as 8 and L is coded as 3, how is ELEPHANT coded in that language?
- (a) 23251078
(b) 32210587
(c) 23527801
(d) 22315078
27. If 'INDIA' stands for 'I - 14 - D - 9 - A' and 'NEPAL' stands for N - 5 - P - 1 - L, then how will you code the GIRL?
- (a) G9R12
(b) G15R10
(c) G10R9
(d) G9R11
28. If EXPORT is coded as USPQYF, then how will CAPITAL be coded?
- (a) MBJUQBD
(b) MBUJQBD
(c) BMUJQBD
(d) MBUJQDB
29. In a certain code '59346' is written as \$AD%F and '8173' is written as 'HB#D'. How is '9865' written in that code?
- (a) HAF\$
(b) AFH\$
(c) ADF\$
(d) None of these
30. DONKEY : XDJMNC :: ZEBRA ?
- (a) YDAQZ
(b) ZQADY
(c) ZDAQB
(d) ZQYDA
31. RADIO → UCHKT :: AUDIO → ?
- (a) CVHKT
(b) BWHKT
(c) DXHKT
(d) DWHKT

32. 'book' is coded as 'pencil', 'pencil' is coded as 'mirror', 'mirror is coded as 'book'. Then what is useful to write on a paper?
 (a) Mirror
 (b) Book
 (c) Pencil
 (d) Book & pencil
33. In a certain code, 'il be pee' means 'roses are blue', 'sik hee' means 'red flowers' and 'pee mit hee' means 'flowers are vegetables', How is 'red' written in that code?
 (a) hee
 (b) sik
 (c) be
 (d) cannot be determined
34. In a certain code language : 'dugo hui mul zo' stands for 'work is very hard' 'hui dugo ba ki' for 'Bingo is very smart'; 'nano mul dugo' for 'cake is hard'; and 'mul ki gu' for 'smart and hard' Which of the following word stand for Bingo ?
 (a) Jalu
 (b) Dugo
 (c) Ki
 (d) Ba
35. If Orange is called Lemon, Lemon is called Flower, Flower is called Fish, Fish is called Tail and Tail is called Pen, what is Rose ?
 (a) Pen
 (b) Lemon
 (c) Flower
 (d) Fish
36. If A stands for +, B stands for -, C stands for x, what is the value of (10C4)(A) (4C4)B6 ?
 (a) 60
 (b) 50
 (c) 56
 (d) 46
37. According to a military code, SYSTEM is SYSMET and NEARER is AENRER. What is the code for fraction?
 (a) CARFTINO
 (b) CARFNOIT
 (c) FRACNOIT
 (d) ARFCNOIT
38. In a certain code language, if the value of 'BLOCK' = 13 and 'CURTAIN' = 27, then what is the value of the word 'SCIENCE' ?
 (a) 32
 (b) 36
 (c) 38
 (d) 34
39. Study the following information carefully to answer the given questions. 'dumb monkeys are actors' is coded as 'la pa zi ta' 'joker monkeys are dumb' is coded as 'pa zi la sa' 'flower are red fool' is coded as 'na hi ga pa' 'dumb pins and flower' is coded as 'zi mi jo ga' How will 'dumb joker flower' be coded in the given language?
 (a) zi la sa
 (b) zi sa ga
 (c) sa mi jo
 (d) pa zi mi

40. Study the following information carefully to answer the given questions. 'dumb monkeys are actors' is coded as 'la pa zi ta' 'joker monkeys are dumb' is coded as 'pa zi la sa' 'flower are red fool' is coded as 'na hi ga pa' 'dumb pins and flower' is coded as 'zi mi jo ga' What does 'pa' stands for?

- (a) joker
- (b) flower
- (c) are
- (d) pins

41. This question has two statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion/s logically follow/s from the given statements.

Statements:

- 1. Some pickles are roses.
- 2. All roses are lemons.

Conclusions:

- 1. Some lemons are pickles.
- 2. All lemons are roses.

- (a) Only 1 follows
- (b) Neither 1 nor 2 follows
- (c) Both 1 and 2 follows
- (d) Only 2 follows

42. In this question, two statements are given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically.

Statements:

- 1. No car is ball.
- 2. No ball is table.

Conclusions:

- 1. No car is table.
- 2. All tables are cars.
- (a) Only conclusion 1 follows
- (b) Only conclusion 2 follows
- (c) Both conclusions 1 and 2 follow
- (d) Neither conclusion 1 nor 2 follows

43. Three Statements are given followed by Three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

- 1. All books are copies.
- 2. No copy is a pen.
- 3. Some erasers are books.

Conclusions:

- 1. Some copies are erasers.
- 2. Some pens are books.
- 3. No eraser is a pen.

- (a) Only conclusion 2 follows.
- (b) Both conclusions 1 and 2 follow.
- (c) Both conclusions 1 and 3 follow.
- (d) Only conclusion 1 follows.

44. In this question, two statements are given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically.

Statements:

- 1. All the harmoniums are instruments.
- 2. All the instruments are flutes.

Conclusions:

- 1. All the flutes are instruments.

2. All the harmoniums are flutes.
(a) Only 1 conclusion follows
(b) Only 2 conclusion follows
(c) Either 1 or 2 follows
(d) Neither 1 nor 2 follows

45. In this question, two statements are given followed by two conclusions. Choose the conclusion(s) which best fit(s) logically.

Statements:

1. All cars are cats.
2. All fans are cats.

Conclusions:

1. All cars are fans.
2. Some fans are cars.
(a) Only (1) conclusion follows
(b) Only (2) conclusion follows
(c) Either (1) or (2) follows
(d) Neither (1) nor (2) follows

46. Two statements followed by two conclusions are given below. You have to take the statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/ follow from the statement, disregarding the commonly known facts:

Statement 1 : Some bikes are cars

Statement 2 : Some cars are trucks

Conclusion 1 : All trucks being bikes is a possibility

Conclusion 2 : Some trucks may be bikes

Conclusion 3 : No trucks being bikes is a possibility

Which of the above conclusions is/are correct?

- (a) 1 and 2
(b) 2 and 3
(c) 1 and 3
(d) 1, 2 and 3

47. Two statements followed by two conclusions are given below. You have to take the statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/ follow from the statement, disregarding the commonly known facts:

Statement 1: All A are B

Statement 2: All B are C

Statement 3: Some C are D

Conclusion 1: Some B are D

Conclusion 2: All A are C

Which of the above conclusions is/are correct?

- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

48. Three statements followed by four conclusions are given below. You have to take the statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/ follow from the statement, disregarding the commonly known facts:

Statement 1: All cars are rickshaws

Statement 2: All rickshaws are road

Statement 3: Some roads are drivers

Conclusion 1: All drivers are roads

Conclusion 2: Some cars are not drivers
Conclusion 3: Some rickshaws are drivers

Conclusion 4: All roads being rickshaws is a possibility

Which of the following is correct?

- (a) Only conclusion 3 and 4 follows
- (b) Only conclusion 1 and 3 follows
- (c) Only Conclusion 4 follows
- (d) Only Conclusion 2 follows

49. Three statements followed by two conclusions are given below. You have to take the statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/follow from the statement, disregarding the commonly known facts:

Statement 1 : All dark is black

Statement 2 : No day is dark

Statement 3 : Some days are bright

Conclusion 1 : Some bright may be dark

Conclusion 2 : All days being black is a possibility

Which of the following is correct?

- (a) Both Conclusion 1 and 2
- (b) Neither Conclusion 1 or 2
- (c) Only Conclusion 1 follows
- (d) Only Conclusion 2 follows

50. Three statements followed by three conclusions are given below. You have to take the statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows/

follow from the statement, disregarding the commonly known facts:

Statement 1 : All sheep are cow

Statement 2 : Some sheep are camels

Statement 3 : No cow is pig

Conclusion 1 : Some camels are cow

Conclusion 2 : No camel is pig

Conclusion 3 : Some sheep can be pig

Which of the following is correct?

- (a) Only Conclusion 1 and 2
- (b) Conclusion 1, 2 and 3 follows
- (c) Only Conclusion 1 follows
- (d) Only Conclusion 3 follows

51. A certain sum of money amounts to $\frac{7}{4}$ of itself in 3 years. The rate percent p.a. is

- (a) 25 %
- (b) 20 %
- (c) 15%
- (d) 10 %

52. The simple interest on a sum of money is of the principal and the number of years is equal to the rate % p.a. The rate % p.a. is

- (a) 5 %
- (b) $2\frac{1}{3}\%$
- (c) 10 %
- (d) 9 %

53. Anoop borrowed Rs. 800 at 6 % p.a. & Rs. 1200 at 7 % p.a. for the same duration. He had to pay Rs. 1584 in all as interest. Find the time period.

- (a) 10 years
- (b) 11 years
- (c) 12 years
- (d) 13 years

54. A man borrowed a certain sum of money at the rate of 6 % per annum for the first two years, 9% per annum for the next three years, and 14% per annum for the period beyond 5 years. If he pays a total interest of Rs. 22,800 at the end of 9 years, find the amount he borrowed.
- (a) ₹24,000
(b) ₹13,000
(c) ₹28,000
(d) ₹35,000
55. The simple interest on a sum of money in 5 years at 12 % per annum is Rs. 400 less than the simple interest accrued on the same sum in 7 years at 10 % per annum. Find the sum.
- (a) ₹3000
(b) ₹4000
(c) ₹3500
(d) ₹4500
56. In a certain code 'PURPOSE' is written as 'UPRSOE'. How would 'WATER' be written in that code?
- (a) WATRE
(b) AWTRE
(c) AWETR
(d) WEATR
57. If CALM is written as HEOO , YEAR may be written as
- (a) DHDS
(b) DTDH
(c) DDHT
(d) DIDT
58. In a certain code language, '134' means 'good and tasty'; '478' means 'see good pictures' and '729' means 'pictures are faint'. Which of the following digits stands for 'see'?
- (a) 9
(b) 2
(c) 1
(d) 8
59. In certain code, TOGETHER is written as RQEGRJCT. In the same code PAROLE will be written as?
- (a) NCPQJG
(b) NCQPJG
(c) RCPQJK
(d) RCTQNG
60. In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?
- (a) 318826
(b) 318286
(c) 618826
(d) 338816
61. If SAND is called AIR, Air is called PLATEAU, PLATEAU is called WELL, WELL is called ISLAND and ISLAND is called SKY, then from where will a woman draw water?
- (a) WELL
(b) ISLAND
(c) SKY
(d) AIR

62. A sum becomes 27 times in 3 years, compounded annually at a certain rate of interest. Calculate annual interest rate.
- (a) 150%
(b) 100%
(c) 300%
(d) 200%
63. Compute the compound interest on Rs. 16000 for 2 years 10% per annum when compounded half yearly.
- (a) 18600
(b) 3448.1
(c) 18640
(d) More than one of the above
64. What is the compound interest on a sum of Rs. 13,000 at 15% p.a. in 2 years, if the interest is compounded 8-monthly?
- (a) Rs. 4,404
(b) Rs. 4,330
(c) Rs. 4,033
(d) Rs. 4,303
65. A sum invested at compound interest amounts to Rs. 7,800 in 3 years and Rs. 11,232 in 5 years. What is the rate per cent?
- (a) 20%
(b) 26%
(c) 18%
(d) 15%

Read the following passages and answer the items that follow the passages. Your answers to these items should be based on the passages only

Passage:1

These days, the term Artificial Intelligence (AI) seems to be everywhere. The public has come to view it with mixed perceptions. On one side, it is a problem-solver: AI has helped in monitoring heart problems and eye conditions and offered treatment options; AI predicts protein structure and aids in the development of new drug molecules. Likewise, it predicts cyclones, monsoon strengths, etc. On the dark side are fears that jobs may be lost to thinking machines that work 24/7 and do not need a Diwali vacation, and may intrude on your privacy and misuse your data. But nobody doubts that AI will help us in addressing large-scale problems that require the analysis of huge data. As India's development gathers momentum, we are faced with the eventuality of resource limitations. We may need much more than we have.

66. Which one of the following statements best implies the most rational assumption that can be made from the passage?
- (a) The positive applications of AI in healthcare and environmental predictions outweigh the concerns about job loss and privacy invasion.
- (b) The public's mixed perceptions of AI stem from a lack of understanding of its potential benefits and the inevitable resource limitations in India's development.
- (c) The fears about job loss and privacy invasion are unwarranted as AI is primarily a problem-solving tool focused on addressing large-scale

problems.

- (d) The potential resource limitations in India's development highlight the need for AI to play a crucial role in overcoming challenges and addressing data analysis needs.

67. Determine the passage's inferred viewpoint on the future application of AI to solving complex issues and resource constraints:

- (a) AI is likely to exacerbate resource limitations in India's development rather than contribute to solving large-scale problems.
- (b) The public's mixed perceptions of AI are primarily driven by concerns about job loss and privacy invasion rather than its potential benefits in healthcare and environmental predictions.
- (c) AI's positive contributions in monitoring health conditions and predicting environmental phenomena position it as a valuable tool in overcoming resource limitations.
- (d) The fears about job loss and privacy invasion are the primary focus of the passage, overshadowing any potential benefits of AI in addressing large-scale problems.

Passage:2

Gaganyaan is the name of the ISRO mission to send Indian astronauts to low-earth orbit for a short duration, onboard an Indian launch vehicle. Technically, it is a demonstration mission: it will

test various technologies required for human spaceflight, which remains the most complicated form of spaceflight, and demonstrate India's familiarity with their production, qualification, and use. Last year, Prime Minister Narendra Modi "directed" ISRO to have an indigenous space station by 2035 and land an Indian on the moon by 2040. While its most recent missions have reinforced ISRO's reputation as a reliable launch provider also capable of flying sophisticated interplanetary missions, including Chandrayaan-3, the two new goals are technologically even more ambitious. Further, ISRO will attempt to execute them together with future moon missions. Chandrayaan-3 concluded the first phase of ISRO's lunar exploration programme.

68. Determine the most logical conclusion about the importance of Gaganyaan and ISRO's upcoming lunar exploration objective:

- (a) Gaganyaan is primarily a demonstration mission for human spaceflight, with the main goal of landing an Indian on the moon by 2040.
- (b) While Gaganyaan is a demonstration mission for human spaceflight, ISRO's future goals involve a space station by 2035 and lunar exploration missions, including Chandrayaan-3.
- (c) ISRO's lunar exploration program, including Chandrayaan-3, is the primary focus, with Gaganyaan serving as a secondary mission

to test technologies for human spaceflight.

- (d) Prime Minister Narendra Modi's directive for an indigenous space station and lunar landing by 2035 and 2040 respectively is independent of ISRO's current and future missions.

69. Which one of the following statements best reflects the crux of the passage?

- (a) Gaganyaan is a demonstration mission testing technologies for human spaceflight, and ISRO has ambitious goals of a space station by 2035 and a lunar landing by 2040.
- (b) Chandrayaan-3 concludes the first phase of ISRO's lunar exploration program, marking the culmination of its recent missions.
- (c) ISRO's reputation as a reliable launch provider is enhanced by Gaganyaan, which also serves as a precursor to Chandrayaan-3 and future lunar missions.
- (d) Prime Minister Narendra Modi's directive for an indigenous space station and lunar landing is unrelated to ISRO's ongoing and future missions, including Gaganyaan and Chandrayaan-3.

Passage:3

Medical humanities constitutes an interdisciplinary nexus delving into the intricate interplay between medicine, health, and the humanities. This intellectual amalgamation seamlessly integrates

diverse disciplines such as literature, history, philosophy, ethics, anthropology, and art to scrutinize the profound nexus between human experiences of affliction, suffering, convalescence, and care, intricately interwoven with cultural mores, values, and narratives. Beyond mere observation, medical humanities serves as a critical vantage point for introspection into the methodologies and presumptions underpinning medical and healthcare practices. In addition, it acts as a crucible fostering heightened empathy, compassion, and refined communication acumen among healthcare practitioners and patients alike. In essence, medical humanities serves as an indispensable enrichment to both the comprehension and execution of medicine and healthcare within our intricate and diverse societal tapestry.

70. Which of the following statements best reflects the logical inference from the passage given above?

- (a) Medical humanities primarily focuses on the observation of cultural narratives and has limited impact on healthcare practices.
- (b) The interdisciplinary nature of medical humanities involves the integration of literature, history, philosophy, ethics, anthropology, and art, critically examining the nexus between human experiences and healthcare practices
- (c) The passage implies that medical humanities has minimal relevance to healthcare methodologies and practices, serving mainly as an

observer of cultural narratives.

- (d) Medical humanities is solely concerned with the scrutiny of cultural mores and values, neglecting its potential impact on healthcare comprehension and execution.

Passage:4

Export stands as an indispensable linchpin within the Indian economic apparatus, constituting a pivotal catalyst for national growth, employment proliferation, and the augmentation of foreign exchange reserves. It functions as a formidable instrument in diversifying the domestic market, heightening industrial competitiveness, and nurturing a culture of innovation. Paramount export commodities encompass petroleum derivatives, gems and jewellery, engineering artifacts, chemical compounds, textiles, and agricultural produce. India, further distinguishing itself, has ascended to preeminence as a principal purveyor of services, particularly in information technology, business process outsourcing, tourism, and education. The strategic export imperative not only propels India's economic ascendancy but also intricately intertwines its developmental trajectory with seamless integration into the global economic milieu, elucidating the nation's resilience and prowess on the international stage.

71. Which one of the following statements best reflects the most logical and rational inference that can be drawn

from the passage?

- (a) Exports play a negligible role in India's economic apparatus, and their impact on national growth and employment proliferation is overstated.
- (b) The strategic export imperative is primarily driven by domestic market considerations, with minimal relevance to India's integration into the global economic milieu.
- (c) The exports in India's economic framework, including national growth, employment proliferation, diversification of the domestic market, and enhanced industrial competitiveness, is crucial for the nation's economic ascendancy.
- (d) India's prowess on the international stage is unrelated to its strategic export imperative and is more significantly influenced by other factors.

72. Assess the relationship between India's strategic export imperative and its integration into the global economic milieu:

- (a) The strategic export imperative mentioned in the passage has minimal influence on India's economic ascendancy and global integration, primarily serving domestic interests.
- (b) India's developmental trajectory is intertwined with seamless integration into the global

economic milieu, showcasing the nation's resilience and prowess on the international stage.

- (c) India's prominence as a principal purveyor of services in information technology and business process outsourcing has negligible impact on its global economic integration, according to the passage.
- (d) The export of services, particularly in tourism and education, is a secondary consideration in India's strategic export imperative, with minimal relevance to global economic integration.

Passage:5

India's soft power epitomizes the capacity to exert influence through allure and magnetism, employing non-coercive modalities. The reservoir of India's soft power emanates from its opulent cultural legacy, multifarious traditions, time-honored history, and seminal contributions spanning art, literature, music, cinema, yoga, spirituality, and gastronomy. This formidable soft power arsenal facilitates India's adept navigation of cultural diplomacy, a strategic deployment of cultural assets to construct intercontinental bridges, cultivate mutual comprehension, and elevate its international standing and sway. The nuanced interplay of India's soft power and cultural diplomacy serves as a linchpin for the cultivation of goodwill, the attraction of trade and investments, the orchestration of agreements and communicative exchanges, and the adept outreach to a global audience, thereby

cementing India's indomitable presence on the international stage.

73. Consider the following assumptions based on the passage:

- 1. India's soft power is primarily derived from coercive modalities.
- 2. The interplay of India's soft power and cultural diplomacy has minimal impact on international goodwill.

Which of the assumptions given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

74. In the context of the passage, what is the primary source of India's soft power and how is it strategically utilized?

- (a) India's soft power comes from military strength and is employed for territorial expansion.
- (b) The source of India's soft power lies in its cultural legacy, traditions, and contributions in various fields. It is strategically utilized for fostering international relations
- (c) India's soft power is primarily rooted in economic dominance and is utilized for trade negotiations.
- (d) The passage does not provide information on the source and strategic utilization of India's soft power.

Passage:6

Climate literacy, a cognitive domain transcending mere comprehension, entails a profound grasp of the intricate

ramifications of climate change on our planetary ecosystem and the concomitant impact on human existence. It is imperative that individuals cultivate an acute awareness of both the antecedents and repercussions of climate change, alongside a cognizance of actionable measures for mitigation and adaptation. The acquisition of climate literacy bestows upon individuals the prerogative to make judicious, well-informed decisions, and assume a mantle of responsibility for the collective future. This erudition not only acts as a catalyst for personal agency but serves as an inspirational impetus, galvanizing global participation in the relentless pursuit of climate action and equitable justice. Climate literacy, far beyond a repository of factual knowledge, represents a synthesis of values, attitudes, and competencies indispensable for fostering a sustainable and resilient world.

75. Based on the passage, assess the validity of the following assumptions:

1. Climate literacy is solely focused on personal decision-making.
2. The acquisition of climate literacy includes a profound grasp of the intricate ramifications of climate change on the planetary ecosystem.
3. Climate literacy does not involve awareness of actionable measures for mitigation and adaptation.
4. Individuals with climate literacy lack the prerogative to make judicious, well-informed decisions for the collective future.

Select the correct answer using the

code given below:

- (a) 1, 2, and 4 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2, 3, and 4

76. According to the passage, what distinguishes climate literacy from mere comprehension, and how does it empower individuals for collective action?

- (a) Climate literacy is distinguished by its focus on individual awareness, and it empowers individuals through personal decision-making.
- (b) The passage does not elaborate on the distinctions of climate literacy from comprehension and its impact on individuals.
- (c) Climate literacy goes beyond mere comprehension by providing factual knowledge and encourages personal agency for collective action.
- (d) Climate literacy transcends comprehension by offering a synthesis of values, attitudes, and competencies, empowering individuals for global participation in climate action.

Passage:7

New Historicism, an intellectual paradigm that burgeoned in the 1980s, audaciously interrogates and subverts the conventional paradigms governing text interpretation. It posits a seismic departure from the entrenched belief in literature as an

immutable, transhistorical manifestation of the human condition, asserting instead that it is an artifact intricately woven into the fabric of its historical and cultural milieu. New historicists meticulously scrutinize the symbiotic relationship between texts and the inexorable societal, political, and ideological currents of their temporal context. This theoretical framework also ventures into the intricate interplay between texts and a mosaic of cultural artifacts, including art, music, and religiosity. New Historicism, far from a homogenous doctrine, manifests as a kaleidoscopic and dynamic realm of scholarly inquiry, tirelessly endeavoring to unveil the labyrinthine nuances and paradoxes inherent in the tapestry of history and culture.

77. According to the passage, how does New Historicism challenge traditional views of literature, and what aspects does it emphasize regarding the relationship between texts and their historical context?

- (a) New Historicism upholds the belief in literature as a transhistorical manifestation and minimizes the role of historical and cultural context.
- (b) New Historicism challenges the view of literature as immutable and asserts its intricate connection to historical and cultural contexts
- (c) New Historicism is a homogenous doctrine that rigidly adheres to traditional paradigms of text interpretation.
- (d) The passage does not provide

information on how New Historicism challenges traditional views of literature.

Passage:8

India shelters a plethora of imperiled fauna, including the Bengal tiger, Asiatic lion, Indian elephant, and snow leopard. These species, integral to India's biodiversity tapestry, wield pivotal roles in upholding ecological equilibrium. Safeguarding them transcends ethical obligations; it emerges as a strategic imperative. These creatures contribute indispensable ecosystem services—pollination, seed dispersal, pest control, soil fertility—besides being tourism revenue generators. Culturally and spiritually revered, their protection from threats like poaching, habitat loss, climate shifts, and human-wildlife conflicts is paramount. This proactive stance ensures the perpetuation of these majestic beings, safeguarding not just wildlife but also fortifying the nation's vitality.

78. Considering the information in the passage, what is the primary rationale presented for the conservation of endangered species in India, and how does their protection contribute to the nation's well-being?

- (a) The passage does not provide information on the rationale for conserving endangered species.
- (b) The conservation of endangered species in India is primarily driven by moral obligations.
- (c) Protecting endangered species is both an ethical duty and a strategic necessity, given their crucial roles in maintaining ecological balance
- (d) Endangered species in India are primarily conserved for tourism revenue generation.

Passage: 9

India stands lauded on the global stage for its distinguished contributions to science and societal amelioration, epitomized by the laureates of Indian origin adorned with the prestigious Nobel Prize. In the annals of 2021, Dr. Raj Chetty and Dr. Shankar Balasubramanian secured this esteemed accolade in Economics and Chemistry, unraveling groundbreaking paradigms in poverty mitigation and DNA sequencing. They joined the pantheon of 11 other Nobel laureates with Indian lineage, adorning realms of physics, medicine, literature, and peace. These luminaries not only bestowed honor upon India but also ignited an enduring flame of inspiration among successive generations of Indian youth, propelling them towards pursuits of excellence and innovation in their chosen spheres.

79. Which one of the following statements most likely reflects as to what the author of the passage intends to say?
- (a) The passage does not provide information on the global recognition of Indian Nobel laureates in 2021 or their impact on Indian youth.
 - (b) The global recognition of Indian Nobel laureates in 2021 and underscores their enduring impact on inspiring successive generations of Indian youth
 - (c) Indian Nobel laureates in 2021 were solely recognized for their contributions to science, and their impact on Indian youth is not

discussed in the passage.

- (d) The passage mentions the Nobel laureates but does not specify the fields of study or their impact on Indian youth.

Passage:10

The resplendent Indian peafowl, designated the national bird in 1963 by Prime Minister Jawaharlal Nehru, embodies India's rich cultural and natural legacy. Revered for its regal demeanor, the peacock symbolizes grace, beauty, and national pride. Its vibrant plumage, especially the courtship display, epitomizes aesthetic grandeur. Widespread across India, the peacock is an omnivore, sustaining on grains, fruits, insects, and small animals. As a sentinel, its resonant calls warn of potential predators. Legally protected, harming this emblematic species incurs severe consequences, reinforcing its cultural and ecological significance.

80. On the basis of the passage provided, the following assumptions have been made:

- 1. The designation of the peacock as the national bird of India in 1963 was a decision primarily influenced by Prime Minister Jawaharlal Nehru.
- 2. The peacock's vibrant plumage, particularly its courtship display, serves as a significant symbol of aesthetic grandeur in Indian culture.
- 3. The legal protection afforded to the peacock in India is a measure intended to reinforce its cultural and ecological significance.

Which of the assumptions are valid?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2, and 3

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