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ESE - 2016

GENERAL ABILITY TEST

QUESTIONS WITH DETAILED SOLUTIONS

SET - A

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PART- A
SPOTTING ERRORS

Directions: Each item in this section has a sentence with three underlined parts labeled (a), (b) and (c). Read each sentence carefully to find out whether there is any error in any underlined part and indicate your response in the Answer Sheet against the corresponding letter i.e., (a) or (b) or (c). If you find no error, your response should be indicated as (d).

01. We were in search of an emporium where we could buy ladies garments cheaply.

(a)

(b)

(c)

No error

(d)

01. Ans: (c)

Sol: ladies' garments

02. Mahatma Gandhi was in arrest on several occasions during the freedom struggle.

(a)

(b)

(c)

No error

(d)

02. Ans: (a)

Sol: was arrested

03. A part of the audience became restive and began to shout loudly. No error

(a)

(b)

(c)

(d)

03. Ans: (a)

Sol: a small group of / a few of

04. I have been frantically trying to find a suitable house in Delhi from the past six months.

(a)

(b)

(c)

No error

(d)

04. Ans: (c)

Sol: for the past six months



05. People is likely to revolt against a government if treated harshly over a long period.
(a) (b) (c)

No error.

(d)

05. Ans: (a)

Sol: people are

06. Speech is most valuable among the faculties which man possesses. No error.
(a) (b) (c) (d)

06. Ans: (a)

Sol: the most

07. A large number of people continues to be illiterate in our country. No error.
(a) (b) (c) (d)

07. Ans: (b)

Sol: continue to be

08. A day later they went shopping in city with lot of money. No error.
(a) (b) (c) (d)

08. Ans: (c)

Sol: with a lot of money

09. What you are doing to achieve a first in the annual examinations? No error.
(a) (b) (c) (d)

09. Ans: (a)

Sol: what are you doing

10. Many a flower is born to blush unseen. No error.
(a) (b) (c) (d)

10. Ans: (d)



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11. His greatest weakness is that he does not listen to anybody and is often blind of his own faults.
(a) (b) (c)
No error
(d)

11. Ans: (c)

Sol: blind to his own faults

12. He caught him by the neck and dealt him a sound thrashing. No error.
(a) (b) (c) (d)

12. Ans: (b)

Sol: and gave him



13. Spectators of a football match are pleased when a goal is thrown. No error.
(a) (b) (c) (d)

13. Ans: (c)

Sol: goal is scored

14. The whole country will be perished if people do not work hard. No error.
(a) (b) (c) (d)

14. Ans: (b)

Sol: will perish

15. I know by experience that badminton can be a very exciting game. No error.
(a) (b) (c) (d)

15. Ans: (a)

Sol: I know from experience

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SENTENCE IMPROVEMENT

Directions: Look at the underlined part of each sentence. Below each sentence are given three possible substitutions for the underlined part. If one of them (a), (b) or (c) is better than the underlined part, indicate your response on the Answer Sheet against the corresponding letter (a), (b) or (c). If none of the substitutions improves the sentence, indicate (d) as your response on the Answer Sheet. Thus a “No improvement” response will be signified by the letter (d).

16. How much ago did it happen?

- (a) How far (b) However
(c) How long (d) No improvement

16. Ans: (c)

17. He frequents this restaurant.

- (a) seldom visits
(b) looks after
(c) is the manager of
(d) No improvement

17. Ans: (d)

18. I shave on alternative days.

- (a) every second day
(b) alternate days
(c) consecutive days
(d) No improvement

18. Ans: (b)

19. The result of the examination has not known for another two months.

- (a) will not be known
(b) will not know
(c) will not be knowing
(d) No improvement

19. Ans: (a)

20. Ram Singh came very close to win a gold medal for India in the Olympics.

- (a) for winning (b) to have won
(c) to winning (d) No improvement

20. Ans: (c)

21. Many a young men wants to join the army.

- (a) young man (b) a young man
(c) young men (d) No improvement

21. Ans: (b)

22. We have met before, isn't it?

- (a) didn't we? (b) have we?
(c) haven't we? (d) No improvement

22. Ans: (c)

23. You will not succeed, unless you do not work hard.

- (a) unless you will not work hard
(b) unless you will work hard
(c) unless you work hard
(d) No improvement

23. Ans: (c)



24. It is no use to cry over spilt milk.

- (a) crying over spilt milk
- (b) in crying over spilt milk
- (c) of crying over spilt milk
- (d) No improvement

24. Ans: (a)

25. His room is very longer than mine

- (a) too larger than mine
- (b) much larger than mine
- (c) more larger than mine
- (d) No improvement

25. Ans: (b)

26. Though it was raining but he went out.

- (a) and he went out
- (b) he went out
- (c) however he went out
- (d) No improvement

26. Ans: (b)

27. He is sharpening the pencil by a knife.

- (a) on a knife
- (b) from a knife
- (c) with a knife
- (d) No improvement

27. Ans: (c)

28. We were pleased to seeing her.

- (a) to see (b) from seeing
- (c) in seeing (d) No improvement

28. Ans: (a)

29. It became dark after we were walking for about half an hour.

- (a) have been walking
- (b) have walked
- (c) had walked
- (d) No improvement

29. Ans: (c)

30. He is living in this city for the last three years.

- (a) lived (b) has been living
- (c) lives (d) No improvement

30. Ans: (b)

31. 'Where does your friend live?' 'I don't know where my friend does live.'

- (a) does my friend live
- (b) he lives
- (c) lives my friend
- (d) No improvement

31. Ans: (b)

32. Any of the three offers is acceptable to me.

- (a) Every (b) Either
- (c) All (d) No improvement

32. Ans: (d)

33. We all went on picnic last Sunday.

- (a) to a picnic (b) in picnic
- (c) on a picnic (d) No improvement

33. Ans: (c)



34. It is too early to go to school.
 (a) very early (b) quite early
 (c) much early (d) No improvement

34. Ans: (d)

35. A square peg does not fit into a round hole.
 (a) does not fit in a round hole
 (b) cannot fit around a round hole
 (c) does not fit inside a round hole
 (d) No improvement

35. Ans: (a)

ORDERING OF WORDS IN A SENTENCE

Directions: Each of the following items in this section consists of a sentence the parts of which have been jumbled. These jumbled parts have been labelled P, Q, R and S which are followed by four sequences namely (a), (b), (c) and (d). You are required to rearrange the jumbled parts to produce the correct sentence. Choose the correct sequence and mark in your Answer Sheet accordingly.

36. The doctor told
 (P) the patient
 (Q) to give an injection to
 (R) the nurse
 (S) after four hours
 The correct sequence should be

- (a) RQPS (b) RPSQ
 (c) QPSR (d) PSRQ

36. Ans: (a)

37. The judge
 (P) lied to the court
 (Q) why he had
 (R) asked the accused
 (S) in spite of his oath
 The correct sequence should be

- (a) PSRQ (b) QPSR
 (c) PRQS (d) RQPS

37. Ans: (d)

38. His father said,
 (P) and stop
 (Q) on trivial things
 (R) wasting your time
 (S) now get up
 The correct sequence should be

- (a) SPRQ (b) PSRQ
 (c) QRSP (d) RQSP

38. Ans: (a)

39. The stranger's movements
 (P) and the police
 (Q) him
 (R) arrested
 (S) aroused suspicion
 The correct sequence should be

- (a) SQPR (b) RQPS
 (c) SPRQ (d) RPQS

39. Ans: (c)



40. The future
(P) is uncertain
(Q) career
(R) man
(S) of this noble

The correct sequence should be

- (a) PQSR (b) QPSR
(c) RPSQ (d) QSRP

40. Ans: (d)

41. The food
(P) at the party
(Q) served
(R) was delicious
(S) but not wholesome

The correct sequence should be

- (a) PRSQ (b) QPRS
(c) RSPQ (d) QRSP

41. Ans: (b)

SELECTING WORDS

Directions: In the following passage at certain points you are given a choice of three words marked (a), (b) and (c), one of which fits the meaning of the passage. Choose the best word out of the three. Mark the letter, viz., (a), (b) or (c), relating to this word on your Answer Sheet. Examples K and L have been solved for you.

- | | |
|---|--|
| <p>K</p> <p>The (a) boy was in the school in Simla.</p> <p>(b) horse</p> <p>(c) dog</p> | <p>L</p> <p>(a) She was home sick.</p> <p>(b) It</p> <p>(c) He</p> |
|---|--|

Explanation: Out of the list given in item K, only 'boy' is the correct answer because usually, a boy, and not a horse or a dog, attends school. So '(a)' is to be marked on the Answer Sheet for item K. A boy is usually referred to as 'he', so for item L, '(c)' is the correct answer. Notice that to solve the first item K you have to read the rest of the sentence and then see what fits best.



PASSAGE

The crow is a familiar bird. Everybody must have seen one. With their cawing the crows

42

Wake us up early in the morning. The cawing of the crows is very (a) pleasant. They
(b) raucous
(c) moving

42. Ans: (b)

43

44

seem to know a lot

(a) about men. They know that men throw (a) in much
(b) of (b) away
(c) from (c) over

43. Ans: (a)

44. Ans: (b)

45

rubbish which is food for

(a) them, so they are very watchful. They
(b) us,
(c) you,

45. Ans: (a)

46

47

(a) jump around to pick up worms and
(b) come
(c) hop

(a) leaves. They can get very bold, so
(b) crumbs.
(c) feathers.

46. Ans: (c)

47. Ans: (b)



48

- (a) when they come close to your
- (b) that
- (c) as

48. Ans: (b)

49

- (a) feet if you have any food to
- (b) hand
- (c) mouth

49. Ans: (b)

50

- (a) present them. They have sharp eyes to
- (b) throw
- (c) offer

50. Ans: (c)

51

- (a) check their cunningness.
- (b) watch
- (c) show

51. Ans: (c)

52

- They are also very
- (a) mild
 - (b) courageous
 - (c) impudent

52. Ans: (c)

53

- and will come into the house
- (a) on snatch up food.
 - (b) to
 - (c) for

53. Ans: (b)

54

- In summer they
- (a) all fly about with their pointed beaks
 - (b) some
 - (c) both

54. Ans: (a)

55

- (a) closed in search
- (b) open
- (c) turned

55. Ans: (b)

56

- of water. They quench their
- (a) thirst at public baths or on the
 - (b) hunger
 - (c) desire

56. Ans: (a)

57

- (a) banks
- (b) floor
- (c) slope

57. Ans: (a)



58

of rivers. It is wonderful to (a) know them washing themselves in small ponds,
(b) watch
(c) look

58. Ans: (b)

59

(a) dashing noisily. They are fond of sitting
(b) splashing
(c) throwing

Shade of trees. They present a beautiful sight when, in the evenings, they return to their nests in thrilling geometric formations.

59. Ans: (b)

60

(a) frequently on the backs of buffaloes in the
(b) shabbily
(c) quietly

60. Ans: (c)

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PART -B

61. Which one of the following is India's first indigenously built nuclear-powered submarine?
- (a) INS Arihant
 - (b) INS Sindhurakshak
 - (c) INS Viraat
 - (d) INS Vikramaditya

61. Ans: (a)

Sol: INS Arihant is the lead ship of India's Arihant class of nuclear-powered ballistic missile submarines built under the Advanced Technology Vessel (ATV) project. The vessel will be powered by an 83 megawatts (111,305 hp) pressurised light-water reactor with enriched uranium fuel.

62. The Constitution of India was adopted by the Constituent Assembly on:
- (a) 26th January 1950
 - (b) 15th August 1947
 - (c) 30th January 1948
 - (d) 26th November 1949

62. Ans: (d)

Sol: The Constitution of India was adopted on 26 November, 1949 and came into force on 26 January, 1950.

63. Which National Highway connects Uttar Pradesh and TamilNadu?
- (a) NH4
 - (b) NH5
 - (c) NH6
 - (d) NH7

63. Ans: (d)

Sol: National Highway 44 (NH 44), (previously National Highway 7), is longest running major North-South National Highway in India that starts from Srinagar and terminates in Kanyakumari, the highway passes through the states of Himachal Pradesh, Punjab, Haryana, Delhi, Uttar Pradesh, Madhya Pradesh, Maharashtra, Telangana, Andhra Pradesh, Karnataka, and Tamil Nadu.

64. Which one of the following countries is not a member of ASEAN?
- (a) Indonesia
 - (b) South Korea
 - (c) Thailand
 - (d) Vietnam

64. Ans: (b)

Sol: The Association of Southeast Asian Nations ASEAN is a political and economic organisation of ten Southeast Asian countries. It was formed on August 8th, 1967 by Indonesia, Malaysia, the Philippines, Singapore, and Thailand and the membership has expanded to include Brunei, Cambodia, Laos, Myanmar, and Vietnam.



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|-------|-------------|-----------------|-----------|-------------|
| 1. | Section - 1 | Engineering - 1 | 50 | 100 |
| 2. | Section - 2 | Engineering - 2 | 50 | 100 |
| 3. | Section - 3 | General Ability | 20 | 40 |

PAPER STRUCTURE

| | | |
|----|------------------------|-----------------------|
| 1. | Total marks | 240 |
| 2. | Total Number Questions | 120 |
| 3. | Time Allowed | 3 Hours = 180 Minutes |
| 4. | Medium of Examination | English |
| 5. | Negative Marketing | Yes (25%) |
| 6. | Type of Questions | Objective type |

SYLLABUS

SECTION - 1 : Materials and Components, Physical Electronics, Electron Devices and ICs, Network theory, Electromagnetic Theory, Electronic Measurements and Instrumentation, Power Electronics

SECTION - 2 : Analog Electronic Circuits, Digital Electronic Circuits, Control Systems, Communication systems, Microwave Engineering, Computer Engineering, Microprocessors

SECTION - 3 : General ability test (General Knowledge, Current Affairs, General English)

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65. The term 'Bali Action Plan', is sometimes seen in news in the context of :
- (a) Global climate change
 - (b) Global terrorism
 - (c) Global wildlife trafficking
 - (d) World trade

65. Ans: (a)

Sol: The Bali Road Map was adopted at the 13th Conference of the Parties (COP 13) in Bali. The Bali Action Plan is divided into five main categories: shared vision, mitigation, adaptation, technology and financing. The shared vision refers to a long-term vision for action on climate change, including a long-term goal for emission reductions.

66. Who of the following is known as the 'Iron Man of India'?
- (a) Vallabhbhai Patel
 - (b) Bipin Chandra Pal
 - (c) Gopal Krishna Gokhale
 - (d) Bal Gangadhar Tilak

66. Ans: (a)

Sol: Sardar Patel known as Iron Man or Steel Man of India was the one who started the dream of Republic India and integrated all the princely states and we are today the largest democracy in the world.

67. Bardoli Satyagraha, 1928 was a peasant movement launched against the:
- (a) Raised rate of tax by the Government
 - (b) Failure of Round Table Conference
 - (c) Visit of Simon Commission
 - (d) Lathi charge on Lala Lajpat Rai

67. Ans: (a)

Sol: The Bardoli Satyagraha of 1928, in the state of Gujarat, India during the period of the British Raj, was a major episode of civil disobedience and revolt in the Indian Independence Movement. In 1925, the taluka of Bardoli in Gujarat suffered from floods and famine, causing crop production to suffer and leaving farmers facing great financial troubles. However, the government of the Bombay Presidency had raised the tax rate by 30% that year, and despite petitions from civic groups, refused to cancel the rise in the face of the calamities.

The situation for the farmers was grave enough that they barely had enough property and crops to pay off the tax, let alone for feeding themselves afterwards. Patel then instructed all the farmers of Bardoli taluka to refuse payment of their taxes.



68. Consider the following pairs:

Well known Lake State

1. Chilika Lake : Odisha

2. Kolleru Lake : Kerala

3. Pulicat Lake : Karnataka

Which of the pairs given above is/are correctly matched?

(a) 1 only (b) 2 and 3 only

(c) 1 and 3 only (d) 1, 2 and 3

68. Ans: (a)

Sol: Chilika Lake is a brackish water lagoon, spread over the Puri, Khurda and Ganjam districts of Odisha state on the east coast of India, at the mouth of the Daya River, flowing into the Bay of Bengal, covering an area of over

1,100km. It is the largest coastal lagoon in India and the second largest lagoon in the world.

Kolleru Lake is one of the largest freshwater lakes in India located in state of Andhra Pradesh 15km away from the city of Eluru.

Pulicat Lake is the second largest brackish – water lake or lagoon in India, after Chilika Lake. It straddles the border of Andhra Pradesh and Tamil Nadu states with over 96% of it in Andhra Pradesh and 3% in Tamil Nadu situated on the Coromandal Coast in South India.

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PATNA HYDERABAD DELHI CHENNAI TIRUPATI
KUKATPALLY PUNE BENGALURU VIZAG PUNE DELHI
DELHI CHENNAI BHOPAL BHUBANESWAR TIRUPATI GUNTUR
VIJAYAWADA DELHI CHENNAI VIZAG
DELHI VIZAG GUNTUR BENGALURU
BHUBANESWAR TIRUPATI PUNE



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69. Which one of the following is not a member of SAARC?

- (a) Myanmar
- (b) Maldives
- (c) Bhutan
- (d) Afghanistan

69. Ans: (a)

Sol: The South Asian Association for Regional Cooperation (SAARC) is a regional intergovernmental organization and geopolitical union in South Asia. Its member states include Afghanistan, Bangladesh, Bhutan, India, Nepal, the Maldives, Pakistan and Sri Lanka.

70. In the Union Government, the Council of Ministers is collectively responsible to:

- (a) Prime Minister
- (b) Lok Sabha
- (c) Both Lok Sabha and Rajya Sabha
- (d) Union Cabinet

70. Ans: (b)

Sol: All ministers, as a body are collectively responsible to the house of people (Lok Sabha). This responsibility, called the collective responsibility implies that ministers work as one unit/team.

71. If the Annual Union Budget is not passed by Lok Sabha:

- (a) The President of India asks the Finance Minister to resign

(b) The Prime Minister asks the Finance Minister to resign

(c) The Finance Minister modifies it and presents it again

(d) The Prime Minister submits the resignation of his Cabinet

71. Ans: (d)

Sol: If the annual budget is not passed by the Lok Sabha the PM submits the resignation of his cabinet which means the PM failed to prove his majority in the house.

72. Which of the following is/are used as both fertilizer as well as explosive?

- 1. Ammonium nitrate
- 2. Calcium sulfate
- 3. Potassium permanganate

Select the correct answer using the code given below

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

72. Ans: (a)

Sol: The chemical compound ammonium nitrate, is a white crystalline solid and is highly soluble in water. It is predominantly used in agriculture as a high-nitrogen fertilizer. The compound is used as an explosive in mining, and also sometimes in improvised explosive devices.



73. The expenditure which can be charged on the Consolidated Fund of India:
- (a) is discussed and voted by the Parliament
 - (b) can be discussed but is not put to vote before Parliament
 - (c) can neither be discussed nor voted by the Parliament
 - (d) is discussed and voted by the Lok Sabha only

73. Ans: (b)

Sol: The expenditure which can be charged on the Consolidated Fund of India can be discussed but is not put to vote before Parliament. Eg: debt charges of govt. of India, salaries of President and other expenses on his office etc.

74. What is NEOShield, sometimes seen in news?
- (a) An international consortium to address the asteroid threat to Earth
 - (b) A geo-engineering project of OECD countries to find the ways to save the Earth from global warming
 - (c) NASA's project to find the ways to ward off the effects of solar flares on out communication systems
 - (d) A ballistic missile defence system developed by a group of countries

74. Ans: (a)

Sol: NEO Shield is an international consortium to address the near-Earth object (NEO) impact threats to Earth, and to organize, prepare and implement mitigation measures.

75. Consider the following plants:

- 1. Cycas
- 2. Date palm
- 3. Pinus

Which of the above is/are flowering plants?

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

75. Ans: (c)

Sol: Cycas is a plant which comes under order Cycadales and division Gymnospermae. Date palm comes under Angiosperms. Pine is a conifer comes under Pinophyte which is a gymnosperm. Angiosperms are flowering plants whereas gymnosperms don't have ovary.

76. Recently, between which of the following countries has a 534km long gas pipeline been proposed to be constructed?
- (a) France and Hungary
 - (b) Germany and Italy
 - (c) Poland and Lithuania
 - (d) Greece and Turkey



76. Ans: (c)

Sol: To help create an integrated EU energy market, the European Commission has drawn up a list of 248 Projects of Common Interest (PCIs) under 8 corridors. The Baltic Energy Market Interconnection Plan in Gas is the 8th corridor under which a 543 km gas pipeline will be constructed to connect Poland and Lithuania (GIPL- Gas Interconnection Poland Lithuania).

77. Consider the following statements:

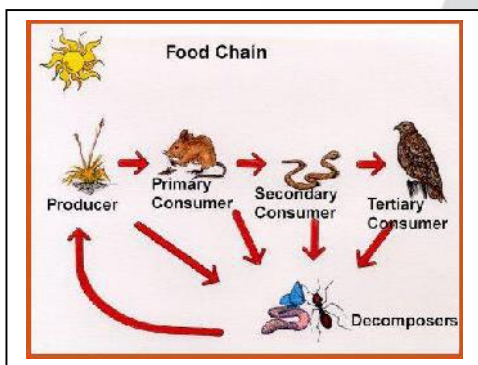
1. Snakes are always at the end of a food chain.
2. Some snakes are viviparous

Which of the statements given above is/are correct?

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

77. Ans: (b)

Sol: Snakes are not at the end of the food chain.



There are two ways snakes give birth to live young viviparous (no eggs) and ovoviviparous (egg retained inside the female's body) and both produce live and fully functional baby snakes.

78. An eastward traveller from India crossing the International Date Line, in order to get the correct day and time of the local area should turn his watch:

- (a) forward
(b) forward and should move his day calendar backward
(c) backward
(d) backward and should move his day calendar forward

78. Ans: (b)

Sol: As we cross International Date Line, we gain a day. Hence, as we move eastward, we should turn our watch forward and calendar backward.

79. Consider the following statements:

1. Red panda in its natural habitat is found in Eastern Himalayas.
2. Gharial in its natural habitat is found in Bhitarkanika mangroves.

Which of the statements given above is/are correct?

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



79. Ans: (a)

Sol: The red panda also called lesser panda, red bear-cat, and red cat-bear, is a mammal native to the eastern Himalayas and southwestern China.

The gharial is one of three crocodilians native to India, the other two being the mugger crocodile and the saltwater crocodile. It is a fish-eating crocodile, is a crocodilian of the family Gavialidae, native to the northern part of the Indian Subcontinent. Today small populations of Gharials are present in Son River, Girwa River, the Ganges, Mahanadi river and the Chambal river. National Chambal Sanctuary is the only place in India where a large wild population of India's special crocodilian Gharial is found. Gharial is on the brink of extinction and falls in the critically endangered category.

80. Who among the following was the first Governor-General of Independent India?

- (a) C. Rajagopalachari
- (b) Rajendra Prasad
- (c) Lord Mountbatten
- (d) S. Radhakrishnan

80. Ans: (c)

Sol: India and Pakistan acquired independence in 1947, but Governors-General continued to be appointed over each nation until republican constitutions were written. Louis Mountbatten, 1st Earl Mountbatten of Burma remained Governor-General of India for some time after independence, but the two nations were otherwise headed by native Governors-General.

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81. With reference to carbon dioxide, which of the following statements is/are correct?

1. It is released from the interior of the Earth during volcanic eruption.
2. It corrodes metal surfaces.
3. It is required for the green plants for their survival.

Select the correct answer using the code given below

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

81. Ans: (d)

Sol: Carbon dioxide exists in Earth's atmosphere as a trace gas at a concentration of about 0.04 percent (400 ppm) by volume. Natural sources include volcanoes, hot springs and geysers.

As part of the carbon cycle, plants, algae, and cyanobacteria use light energy to photosynthesize carbohydrate from carbon dioxide and water, with oxygen produced as a waste product.

Carbon dioxide reacts with water: $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{HCO}_3^- + \text{H}^+$ As the concentration of CO_2 increases, so does the concentration of the H^+ ion. This ion then react with Fe in metals: $\text{Fe} + 2\text{H}^+ \rightarrow 2\text{H} (\text{atom}) + \text{Fe}^{2+}$

As corrosion proceeds, the ferrous ions produced react with the bicarbonate ions to form ferrous carbonate.

82. A group of countries called G4 is often mentioned in the news as contenders for a permanent membership in the United Nations Security Council. Which of the following is *not* one of them?

- (a) Brazil (b) Germany
(c) Japan (d) South Africa

82. Ans: (d)

Sol: The G4 nations comprising Brazil, Germany, India, and Japan are four countries which support each other's bids for permanent seats on the United Nations Security Council.

83. Turkey, which is frequently in the news, does not have a border with which of the following?

- (a) Romania (b) Iran
(c) Georgia (d) Bulgaria

83. Ans: (a)

Sol:



Romania does not have a border with Turkey. Iran, Georgia, Bulgaria, Syria, Iraq, Iran and Armenia have their borders with Turkey.



84. Consider the following:

- 1. Amino acids 2. Fatty acids
- 3. Hormones 4. Vitamins

Which of the above can be the sources of cellular energy in a human body?

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

84. Ans: (a)

Sol: Carbohydrates, lipids (fats), and proteins are the major constituents or nutrients of foods and serve as fuel for the human body. More specifically, it is the end products of digestion – which breaks down these macro nutrients into smaller nutrients – that are the true fuel sources for the body’s 100 trillion cells. The major absorbed end products of food digestion are glucose (from carbohydrates); short, medium and long-chain fatty acids (from lipids); and amino acids (from protein). All three classes of these nutrients can serve as fuel sources for the mitochondria to produce cellular energy in the form of ATP.

85. What causes wind to deflect toward left in the southern hemisphere?

- (a) Atmospheric temperature
- (b) Earth’s magnetic field
- (c) Rotation of the Earth
- (d) Atmospheric pressure

85. Ans: (c)

Sol: Due to Coriolis force winds in the northern hemisphere deflect to its right and in the southern hemisphere it deflects to its left. This is due to the rotation of the earth.

86. Which one of the following statements about Earth’s diameter is true?

- (a) Polar diameter slightly less than the equatorial diameter
- (b) Polar and equatorial diameters are equal
- (c) Polar diameter is longer than the equatorial diameter
- (d) Polar diameter is half of the equatorial diameter

86. Ans: (a)

Sol: The equatorial diameter of Earth is 12,756 km, its polar diameter is 12,713 km.

87. Recently, the Interim Secretariat of the International Solar Alliance was inaugurated at :

- (a) Gurgaon (b) Panipat
- (c) Vadodara (d) Visakhapatnam

87. Ans: (a)

Sol: The Prime Minister of India Shri Narendra Modi, and the President of France Mr François Hollande, on 25th Jan jointly laid the foundation stone of the International Solar Alliance (ISA)



Headquarters and inaugurated the interim Secretariat of the ISA in National Institute of Solar Energy (NISE), Gwalpahari, Gurgaon.

88. With reference to Loktak lake, consider the following statements :

1. Loktak is a freshwater lake in north-eastern India.
2. Loktak lake carries floating islands that are made up of decaying masses of Vegetation, soil and organic matter.

Which of the statements given above is/are correct?

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

88. Ans: (c)

Sol: Loktak Lake is the largest freshwater lake in North -East India is famous for the phumdis (heterogeneous mass of vegetation, soil, and organic matters at various stages of decomposition) floating over it.

89. Mahatma Gandhi suspended Non-Cooperation Movement due to :

- (a) Its taking violent turn
- (b) Inadequate cooperation from people
- (c) Disapproval of Congress
- (d) Ill health of Mahatma Gandhi

89. Ans: (a)

Sol: The non-cooperation movement was withdrawn because of the ChauriChaura incident, which was taking a violent turn.

90. A warm-blooded animal is one which

- (a) has a fluctuating body temperature
- (b) does not lose heat to surroundings
- (c) absorbs heat from surroundings
- (d) has a constant body temperature

90. Ans: (d)

Sol: Homeotherms (warm blooded) are animals that have a constant body temperature by regulating metabolic processes.

91. Which of the following statements is/are correct?

1. Shale gas is extensively produced in Saudi Arabia and Kuwait
2. Fracking technology used in the extraction of this gas requires large quantities of water.

Select the correct answer using the code given below

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

91. Ans: (b)

Sol: Shale gas is a natural gas that is found trapped within shale formations and has become an increasingly important source

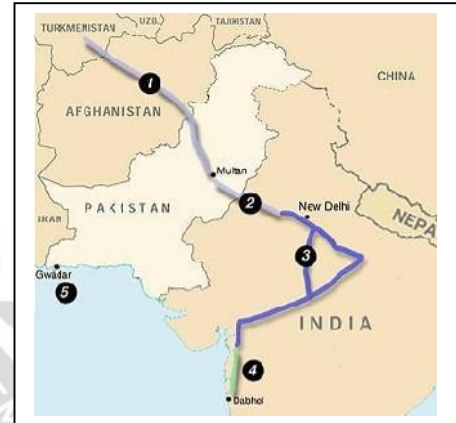
of natural gas in the United States. Hydraulic fracturing (also hydrofracturing, hydrofracking, fracking, or fraccing) is a well-stimulation technique in which rock is fractured by a pressurized liquid. The process involves the high-pressure injection of 'fracking fluid' (primarily water, containing sand or other proppants suspended with the aid of thickening agents) into a wellbore to create cracks in the deep-rock formations through which natural gas, petroleum, and brine will flow more freely. When the hydraulic pressure is removed from the well, small grains of hydraulic fracturing proppants (either sand or aluminium oxide) hold the fractures open.

92. 'TAPI' gas pipeline, sometimes mentioned in the news, is planned to be laid in:
- Turkey-Afghanistan-Pakistan-India
 - Turkmenistan-Azerbaijan-Pakistan-Iran
 - Turkey-Azerbaijan-Pakistan-Iran
 - Turkmenistan-Afghanistan-Pakistan-India

92. Ans: (d)

Sol: The Turkmenistan–Afghanistan–Pakistan–India Pipeline (TAPI), also known as Trans-Afghanistan Pipeline, is a natural gas pipeline being developed by the Asian Development Bank. The

pipeline will transport Caspian Sea natural gas from Turkmenistan through Afghanistan into Pakistan and then to India.



93. Consider the following:

- Palm civet
- Puma
- Cheetah

Which of the above is/are found in India in their natural habitat?

- 1 only
- 2 and 3 only
- 1 and 3 only
- 1, 2 and 3

93. Ans: (a)

Sol: Asian palm civets are native to India, Nepal, Bangladesh, Bhutan, Myanmar, Sri Lanka, Thailand, Singapore, Peninsular Malaysia, Sabah, Sarawak, Brunei Darussalam, Laos, Cambodia, Vietnam, China, Philippines and the Indonesian islands of Sumatra, Java, Kalimantan, Bawean and Siberut.



Puma are found throughout Central and South America. In North America, however, hunting has reduced their range to isolated areas in Mexico, western U.S. wilderness areas, southern Florida and southwestern Canada

The cheetah also known as the hunting leopard, is a big cat that occurs mainly in eastern and southern Africa and a few parts of Iran.

94. Which of the following died of hunger strike in person?
- (a) Bhagat Singh
 - (b) Bhupendranath Sanyal
 - (c) Chandra Shekhar Azad
 - (d) Jatin Das

94. Ans: (d)

Sol: In Lahore jail, Das began a hunger strike along with other revolutionary fighters, demanding equality for Indian political prisoners with those from Europe. Das's hunger strike started on 15 June 1929 and lasted 63 days. Jatin Das died on September 13, 1929.

95. Consider the following statements:

1. Governor of a State can reserve certain bills passed by the State Legislature for consideration of the President of India.

2. Governor of State can make the rules to conduct the business of State Government

Which of the statements given above is/are correct?

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

95. Ans: (c)

Sol: According to Article 200 Governor of a state can reserve certain bills passed by the State Legislature for consideration of the President of India. According to Article 356 the Governor rules the state on the dictates of the Union Govt. and in the name of the President.

96. There is a growing concern about the release of a particular gas into the atmosphere from the permafrost of Arctic region. Which one of the following is that gas?

- (a) Carbon monoxide
- (b) Ethane
- (c) Methane
- (d) Sulfur dioxide

96. Ans: (c)

Sol: Arctic methane release is the release of methane from seas and soils in permafrost regions of the Arctic, due to deglaciation. While a long-term natural process, it may be exacerbated by global warming.



97. "RuPay", recently in the news, is the name of a :

- (a) Debit card (b) Digital currency
(c) Super computer (d) Tax benefit

97. Ans: (a)

Sol: RuPay is an Indian domestic card scheme conceived and launched by the National Payments Corporation of India (NPCI). It was created to fulfil the Reserve Bank of India's desire to have a domestic, open loop, and multilateral system of payments in India. RuPay facilitates electronic payment at all Indian banks and financial institutions, and competes with MasterCard and Visa in India.

98. Which of the following is/are among the main objective/objectives of G20 group of countries?

1. Discussing key issues in the global economy
2. Promoting international financial stability

Select the correct answer using the code given below

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

98. Ans: (c)

Sol: G20 is an international forum for the governments and central bank governors from 20 major economies. It was founded

in 1999 with the aim of studying, reviewing, and promoting high-level discussion of policy issues pertaining to the promotion of international financial stability.

99. With reference to 'Seshachalam Biosphere Reserve', which of the following statements is/are correct?

1. It is located in the Eastern Ghats
2. It is a unique tropical rain forest

Select the correct answer using the code given below:

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

99. Ans: (a)

Sol: The Seshachalam Hills are hilly ranges part of the Eastern Ghats in southern Andhra Pradesh state, in southeastern India. Tropical rainforests of India are found in the Andaman and Nicobar Islands, the Western Ghats, which fringe the Arabian Sea, the coastline of peninsular India, and the greater Assam region in the north-east.

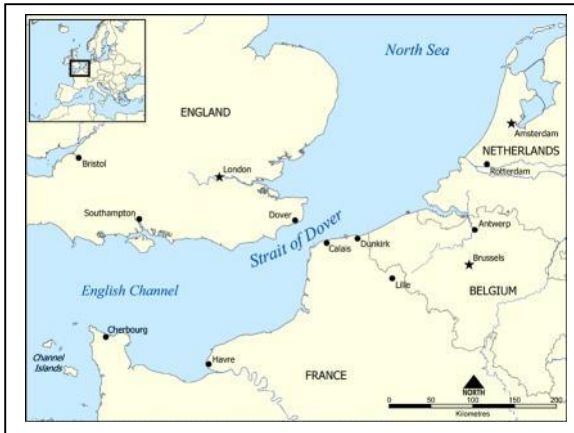
100. Which one of the following is located between France and the United Kingdom?

- (a) Cook Strait
(b) Davis Strait
(c) Strait of Dover
(d) Strait of Gibraltar



100. Ans: (c)

Sol: The Dover Strait is the strait at the narrowest part of the English Channel, marking the boundary between the Channel and North Sea, separating Great Britain from continental Europe.



101. Which of the following is associated with the issue of control and phase out of the use of ozone depleting substances?
- (a) Bretton Woods Conference
 - (b) Doha Development Agenda
 - (c) Geneva II Conference
 - (d) Montreal Protocol

101. Ans: (d)

Sol: The Montreal Protocol on Substances that Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer) is an international treaty designed to protect the ozone layer by phasing out the production of numerous

substances that are responsible for ozone depletion.

102. Consider the following statements:

1. Headquarters of World Trade Organization (WTO) are in Doha
2. World Intellectual Property Organization is a specialized agency of WTO

Which of the statements given above is/are correct

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

102. Ans: (d)

Sol: The WTO's current Director-General is Roberto Azevedo, who leads a staff of over 600 people in Geneva, Switzerland. WIPO is the global forum for intellectual property services, policy, information and cooperation. It is a self-funding agency of the United Nations, with 188 member states.

103. What is 'Falcon 9', recently seen in news?

- (a) A rocket to deliver satellites into orbit
- (b) A short range missile launched from warships
- (c) An unmanned fighter aircraft
- (d) An astronomical space observatory



103. Ans: (a)

Sol: Falcon 9 is a two-stage rocket designed and manufactured by SpaceX for the reliable and safe transport of satellites and the Dragon spacecraft into orbit.

104. Consider the following statements:

1. Earth receives the Sun's energy only at the infrared end of the spectrum
2. Earth reradiates the Sun's heat only as ultraviolet energy.

Which of the statements given above is/are correct.

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

104. Ans: (d)

Sol: UV radiation makes up a very small part of the total energy content of the insulation; the visible range represents only 46-47% of the total energy received from the sun. The final 45% of the sun's total energy is in the near infra-red range. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat).

105. Consider the following crop plants:

1. Banana
2. Potato
3. Turmeric

Which of the above is/are propagated by vegetative methods?

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

105. Ans: (d)

Sol: Banana, Potato, Turmeric don't have seeds in them and hence vegetative/asexual reproduction is the best method of propagation.

106. The Polavaram Irrigation Project, recently in the news, is located in:

- (a) Andhra Pradesh (b) Karnataka
(c) Kerala (d) Tamil Nadu

106. Ans: (a)

Sol: Polavaram Project is a multi-purpose irrigation project which has been accorded national project status by the central government. This dam across the Godavari River is under construction located in West Godavari District and East Godavari District in Andhra Pradesh state.

107. At which of the following places is the Marine National Park located?

- (a) Chandipur-on-sea
(b) Jamnagar
(c) Puducherry
(d) Visakhapatnam



107. Ans: (b)

Sol: Marine National Park in the Gulf of Kutch is situated on the southern shore of the Gulf of Kachchh in the Jamnagar District of Gujarat state, India.

108. How many north-eastern States of India (West Bengal is not included) share its/their border with three other countries?

- (a) One
- (b) Two
- (c) Three
- (d) None

108. Ans: (b)

Sol: Arunachal Pradesh – borders with China, Nepal, Myanmar
Sikkim- borders with Nepal, China, Bhutan



109. ‘Fly ash’, which can be used in making bricks, is emitted from:

- (a) Burning of agricultural waste
- (b) Burning of municipal solid waste
- (c) Mining of aluminum and iron ores
- (d) Thermal power plants

109. Ans: (d)

Sol: Fly ash, is one of the coal combustion products, composed of the fine particles that are driven out of the boiler with the flue gases.

110. Consider the following statements:

1. Snowline occurs at a higher altitude in Eastern Himalayas than in the Western Himalayas.
2. Mangrove forests in India occur along the coastal areas of West Bengal and Odisha only.

Which of the statements given above is /are correct?

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

110. Ans: (a)

Sol: The climatic snow line is the point above which snow and ice cover the ground throughout the year. Tree line and snow line in Eastern Himalayas are higher than in the western Himalayas.

Some of the best mangroves in the world occur in the alluvial deltas of Ganga,



Godavari, Krishna, Kaveri and in the islands of Andaman and Nicobar.

111. Which one among the following is known as the largest producer of steel in the world?

- (a) Australia (b) China
(c) India (d) South Korea

111. Ans: (b)

Sol: In 2015, total world crude steel production was 1,599.5 million metric tonnes (mmt). The biggest steel producing country is currently China, which accounted for 50.3% of world steel production in 2015.

112. Which of the following is/are World Heritage Properties as per UNESCO?

1. Bhitarkanika National Park
2. Bandhavgarh National Park
3. Sundarbans National Park

Select the correct answer using the code given below?

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

112. Ans: (b)

Sol: List of Heritage sites in India national parks:

Great Himalayan National Park Conservation Area (2014)

- Kaziranga National Park (1985)
Keoladeo National Park (1985)

Manas Wildlife Sanctuary (1985)

Nanda Devi and Valley of Flowers National Parks (1988)

Sundarbans National Park (1987)

Western Ghats (2012)

113. Which of the following places have nuclear power plants?

1. Amarkantak 2. Kaiga
3. Rawatbhata 4. Visakhapatnam

Select the correct answer using the code given below

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

113. Ans: (b)

Sol: Some of the nuclear power plants in India

Narora Uttar Pradesh

Rawatbhata Rajasthan

Tarapur Maharashtra

Kudankulam Tamil Nadu

Kaiga Generating Station (KGS),
Karnataka

114. 'Wolf1061c', recently in news, refers to a/an:

- (a) Comet to which a space probe has been sent recently
(b) Asteroid that flew past the earth recently
(c) Galaxy closer to our galaxy
(d) Exoplanet in the Goldilocks Zone around a red dwarf star



114. Ans: (d)

Sol: Wolf 1061c or WL 1061c is an exoplanet orbiting within the habitable zone of the red dwarf star Wolf 1061 in the constellation Ophiuchus, about 13.8 light years from Earth, making it the closest known potentially habitable planet to Earth. The Goldilocks zone is an area of space in which a planet is just the right distance from its home star so that its surface is neither too hot nor too cold.

115. Consider the following countries:

1. Namibia
2. Syria
3. Mozambique

Recently in which of the above countries has a lot of displacement of its/their citizens been caused due to civil war/terrorist violence?

- (a) 1 and 2 only (b) 2 only
(c) 1, 2 and 3 (d) None

115. Ans: (b)

Sol: The Syrian civil war is an ongoing multi-sided armed conflict with international interventions taking place in Syria. International organizations have accused the Syrian government, ISIS and other opposition forces of severe human rights violations, with multiple massacres

occurring. The conflict caused a considerable displacement of population.

116. Which one of the following rivers rises near Mahabaleshwar?

- (a) Godavari (b) Krishna
(c) Kaveri (d) Tapi

116. Ans: (b)

Sol: Krishna river originates in the Western Ghats near Mahabaleshwar at an elevation of about 1,300 meter, in the state of Maharashtra in Central India.

117. Recently, India made a deal with Japan to introduce India's first high speed rail (bullet train) between:

- (a) Ahmedabad and Mumbai
(b) Pune and Mumbai
(c) Ahmedabad and Delhi
(d) Chennai and Hyderabad

117. Ans: (a)

Sol: The Mumbai–Ahmedabad high-speed rail corridor is an approved high-speed rail corridor project signed by India and Japan.

118. In Gandhara School of Art, the image of which of the following deities is a prominent feature?

- (a) Buddha (b) Krishna
(c) Mahavira (d) Shiva



118. Ans: (a)

Sol: Gandhara School of Art is known for the first sculptural representations of the Buddha in human form.

119. Which of the following, considered a carcinogen, is often secretly used by some for artificial fruit ripening?

- (a) Calcium carbonate
- (b) Calcium carbide
- (c) Sodium benzoate
- (d) Sodium sulfate

119. Ans: (b)

Sol: In the artificial ripening of fruit, calcium carbide is sometimes used as source of acetylene gas, which is a ripening agent similar to ethylene. However, this is illegal in some countries because consumption of fruits artificially ripened using calcium carbide can cause serious

health problems in those who partake them.

120. Which of the following is not a member of a group of countries known as G7?

- (a) Australia
- (b) Canada
- (c) France
- (d) Japan

120. Ans: (a)

Sol: G7 is an international organization officially established in 1985 to facilitate economic cooperation among the world's largest industrial nations; summit meetings of the member nations began in 1975. Members are Canada, France, Germany, Great Britain, Italy, Japan, and the United States.