

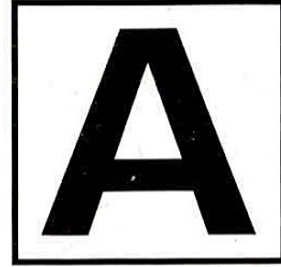
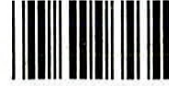
Serial No.

NDA & NA EXAM II: 2017

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO

1332585

Test Booklet Series



T.B.C. : ADU-F-LXT

TEST BOOKLET GENERAL ABILITY TEST

Time Allowed : Two Hours and Thirty Minutes

Maximum Marks : 600

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 Code 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 150 items (questions) in two Parts : **PART - A** and **PART - B**. **Each item in PART - B is printed both in Hindi and 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 away with you the Test Booklet.
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 THE CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.
 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third** 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.

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ध्यान दें : अनुदेशों का हिन्दी रूपान्तर इस पुस्तिका के पिछले पृष्ठ पर छपा है ।

PART - A
Synonyms

Directions : Each item in this section consists of a sentence with an underlined word/words followed by four options. Select the option that is **nearest in meaning** to the underlined word/words and mark your response in your Answer Sheet accordingly.

1. The discussion was wound up after a long and fruitful exchange of views.
(a) postponed
(b) cut short
(c) interrupted
(d) concluded
2. He was fully alive to the need for making adjustments.
(a) concerned about
(b) worried about
(c) aware of
(d) indifferent about
3. The police officer tried to intimidate the witness but in vain.
(a) inform
(b) reward
(c) frighten
(d) persuade
4. We must adopt drastic measures to control population growth.
(a) simple
(b) dramatic
(c) realistic
(d) severe

5. He is extremely meticulous in his approach.
(a) simple
(b) careful
(c) fair
(d) reasonable
6. The experts' minute examination brought to light some important clues.
(a) quick
(b) detailed
(c) superficial
(d) prolonged
7. The decision of the Union Government to repeal the Urban Land Ceiling Act has been welcomed by all.
(a) suppress
(b) amend
(c) cancel
(d) withhold
8. This is his maiden appearance on the screen.
(a) first
(b) last
(c) girlish
(d) shy
9. At the end of the marathon everybody was exhausted.
(a) weakened
(b) honoured
(c) satisfied
(d) tired
10. He gave me a counterfeit coin.
(a) rare
(b) fake
(c) unmatured
(d) inferior

Antonyms

Directions : Each item in this section consists of a sentence with an underlined word/words followed by four options. Select the option that is **opposite in meaning** to the underlined word/words and mark your response in your Answer Sheet accordingly.

11. My mother has been working hard for the last two weeks and she feels run down.
(a) morbid
(b) energetic
(c) exhausted
(d) emotional
12. The President condemned the act of violence during the celebration of the festival.
(a) reason
(b) instigation
(c) restraint
(d) sobriety
13. The students made a generous contribution to the flood relief fund.
(a) niggard
(b) selfish
(c) spendthrift
(d) indecent
14. He was just idle by temperament.
(a) employed
(b) occupied
(c) industrious
(d) happy
15. Most of the decisions taken by the officer were unjust.
(a) serious
(b) lenient
(c) correct
(d) imbecile

16. He is a loving father and takes great delight in his children.
(a) revolt
(b) dissatisfaction
(c) enjoyment
(d) disgust
17. He was quite concerned about his son's career.
(a) unrelated
(b) indifferent
(c) dispassionate
(d) carefree
18. They are confident of success.
(a) imprudent
(b) impatient
(c) diffident
(d) reluctant
19. We carried on the search for the missing person.
(a) delayed
(b) reconsidered
(c) broke up
(d) called off
20. This T.V. has many indigenous components.
(a) Indian
(b) foreign
(c) unnatural
(d) genuine

Selecting Words

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

K

L

The (a) boy was in the school in Shimla.

(a) She was homesick.

(b) horse

(b) It

(c) dog

(c) He

(d) cow

(d) Her

Explanation : Out of the list given in item K, only, 'boy' is the correct answer because usually, a boy, and not a horse, a dog or a cow, 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

After this incident I went to Nainital, and returned after nearly a month. I had

21.
(a) hardly
(b) barely
(c) merely
(d) rarely

taken

22.

(a) out my clothes when I saw Gangu standing
(b) away
(c) off
(d) on

23.
(a) by
(b) near
(c) with
(d) at

a new baby. He was

24.

(a) jumping with joy. Even Nanda
(b) bursting
(c) dancing
(d) singing

25.
(a) could not have
(b) would
(c) should
(d) ought

26.
(a) experimented such joy
(b) shown
(c) felt
(d) heard

27.
(a) at getting Krishna.
(b) in
(c) on
(d) into

His face had the same

28.

(a) light that
(b) glow
(c) sense
(d) hope

29.
(a) comes
(b) appears
(c) rises
(d) shows

on the face of a

30.

(a) starved man after a full meal.
(b) starving
(c) hungry
(d) satisfied

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 parts have been labelled P, Q, R and S. Given below each sentence are four sequences namely (a), (b), (c) and (d). You are required to re-arrange the jumbled parts of the sentence and mark your response accordingly.

31. The spirit of man

has slowly and painfully surmounted

P

and his growing intelligence

Q

all the obstacles that have come in his way

R

has faced all kinds of dangers

S

(a) Q P S R

(b) S Q P R

(c) R P Q S

(d) P R Q S

32. After our school boys had won a well-contested hockey match

so that they might communicate the news of their victory to the headmaster

P

who is a keen sportsman

Q

they came to school in high spirits

R

and takes a very lively interest in school games

S

(a) Q P S R

(b) S Q P R

(c) R P Q S

(d) P R Q S

33. Even a leisurely game like cricket
demanding grace rather than strength

P

and over the rough tactics of the Australian team that visited England in 1921

Q

as we saw in the controversy over body-line bowling can cause much ill-will

R

S

- (a) P S R Q
- (b) R S P Q
- (c) S R Q P
- (d) Q P R S

34. Scientists point out of sunspot activity that it is an aftermath that has now reached its peak

P

Q

R

of the eleven-year cycle

S

- (a) R S P Q
- (b) P Q S R
- (c) Q R P S
- (d) Q S P R

35. As the ship streams from San Diego as walls of gray water from a distant storm in the North Pacific

P

making the greener among us miserable with sea sickness rock and toss the ship

Q

R

those of us aboard have a personal demonstration of powerful ocean movement

S

- (a) P Q R S
- (b) S R P Q
- (c) S P R Q
- (d) Q S R P

Spotting Errors

Directions : Each item in this section has a sentence with three underlined parts labelled (a), (b) and (c). Read each sentence 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).

36. An electrical circuit is the complete path traversed by electric current. No error
(a) (b) (c) (d)
37. He waved us a by-by as he boarded the train which disappeared into the tunnel. No error
(a) (b) (c) (d)
38. There was great deal that had to be scrapped, that must be scrapped;
(a)
but surely India could not have been what she undoubtedly was,
(b)
and could not have continued a cultured existence for thousands of years. No error
(c) (d)
39. With regard to interior decoration, it is the attention given to the less overt aspects of using space
(a)
that give it life, an identity, a quality that makes it exciting and unusual. No error
(b) (c) (d)
40. A small parcel of novels is better than none. No error
(a) (b) (c) (d)

Fill in the blanks

Directions : Each of the following sentences in this section has a blank space and four words or group of words given after the sentence. Select the word or group of words you consider most appropriate for the blank space and indicate your response on the Answer Sheet accordingly.

41. He looks as if he _____ weary.

- (a) is
- (b) was
- (c) would be
- (d) were

42. My house is insured _____ theft and fire.

- (a) for
- (b) against
- (c) in
- (d) towards

43. The result of the prolonged discussion was _____.

- (a) disappointment
- (b) disappointing
- (c) disappointed
- (d) to disappoint

44. You are lucky _____ in the 20th century.

- (a) by being born
- (b) to have been born
- (c) for being born
- (d) to have born

45. Sita is true to _____.

- (a) word
- (b) her words
- (c) the words
- (d) words

46. Years _____ since I saw her last.

- (a) have passed
- (b) had passed
- (c) had been passing
- (d) have been passing

47. When he heard the terrible noise he asked me what was _____ on.

- (a) happening
- (b) being
- (c) getting
- (d) going

48. Could you lend me some money ? I am very _____ of cash at the moment.

- (a) down
- (b) low
- (c) short
- (d) scarce

49. I saw her when she was standing _____ the side of the old statue.

- (a) by
- (b) at
- (c) in
- (d) beyond

50. True friends never _____ their loved ones in adversity.

- (a) abuse
- (b) criticize
- (c) befool
- (d) desert

PART - B

51. Which one of the following was set as a target of average growth of GDP of India over the plan period 2012 – 2017 by the Approach Paper to the Twelfth Five Year Plan ?
- (a) 7 percent
 - (b) 8 percent
 - (c) 9 percent
 - (d) 10 percent
52. Which one of the following is **not** a subject that has been devolved to the Panchayati Raj Institutions by the 11th Schedule of the Constitution of India ?
- (a) Non-conventional energy resources
 - (b) Roads
 - (c) Higher education
 - (d) Libraries
53. Who among the following used the term Industrial Revolution for the first time in English to describe the changes that occurred in the British industrial development between 1760 and 1820 ?
- (a) Friedrich Engels
 - (b) Eric Hobsbawm
 - (c) Arnold Toynbee
 - (d) Georges Michelet
54. Who among the following is the author of the book '*The Indian Struggle, 1920 – 1934*' ?
- (a) Maulana Abul Kalam
 - (b) Jayprakash Narayan
 - (c) Subhash Chandra Bose
 - (d) Manabendra Nath Roy
55. Which one of the following about the Swadeshi Campaign in 1896 is **not** correct ?
- (a) Its centre was Maharashtra
 - (b) Its main participants were students
 - (c) It opposed the levy of tariff on imports
 - (d) It publicly burnt foreign clothes
56. Which one of the following associations was founded in London by Dadabhai Naoroji in 1866 ?
- (a) The Bengal British India Society
 - (b) The East India Association
 - (c) The British Indian Association
 - (d) The Madras Native Association
57. Mariana Trench is located in the ocean floor of
- (a) Southern Atlantic Ocean
 - (b) Western Pacific Ocean
 - (c) Eastern Pacific Ocean
 - (d) Northern Atlantic Ocean

- 58.** Taklamakan Desert is situated in
- Western Asia
 - Southern fringe of Sahara in Africa
 - South America
 - Central Asia
- 59.** Rudraprayag is situated at the confluence of rivers Alaknanda and
- Bhagirathi
 - Mandakini
 - Nandakini
 - Dhauliganga
- 60.** Arrange the following Indian cities according to their locations from west to east :
- Bilaspur
 - Jodhpur
 - Bhopal
 - Ranchi
- Select the correct answer using the code given below :
- 3-2-1-4
 - 2-3-1-4
 - 4-1-2-3
 - 2-1-3-4
- 61.** The Kashmir region receives additional amount of precipitation during the winter brought by
- South-west Monsoon
 - Western Disturbances
 - Retreating Monsoon
 - Temperate Cyclone
- 62.** Which part of India has the Kalakot tertiary coal field ?
- Brahmaputra river basin of Assam
 - Damodar river basin of Jharkhand and West Bengal
 - Himalayan mountain region
 - Cardamom hills in Kerala
- 63.** Tendons through which muscles are connected to bones are tightly compacted bundles of which one of the following long fibrous protein ?
- Fibrin
 - Collagen
 - Elastin
 - Cellulose
- 64.** Which one of the following is the scientific name of the causal organism of elephantiasis ?
- Ascaris lumbricoides*
 - Culex pipiens*
 - Wuchereria bancrofti*
 - Fasciola hepatica*
- 65.** Melanin is the natural pigment that gives colour to human skin, hair and the iris. It provides protection against
- Ultraviolet radiation
 - Infrared radiation
 - X-ray radiation
 - Short wave radio radiation

66. Intake of which one of the following food components should be minimized by patients having Gouty Arthritis due to elevated serum uric acid level ?
- Food fibres
 - Nucleic acids
 - Lipids
 - Carbohydrates
67. Which one of the following statements about microbes is **not** correct ?
- They are used in sewage treatment plants.
 - They are used in industrial fermenters for the production of beverages.
 - No antibiotic has been obtained from any microbe.
 - They are used to get many bioactive molecules for the treatment of diseases.
68. Golden rice is a genetically-modified crop plant where the incorporated gene is meant for biosynthesis of
- Omega-3 fatty acids
 - Vitamin A
 - Vitamin B
 - Vitamin C
69. An object moves in a circular path with a constant speed. Which one of the following statements is correct ?
- The centripetal acceleration of the object is smaller for a gentle curve (i.e., curve of larger radius) than that for a sharp curve (i.e., curve of smaller radius).
 - The centripetal acceleration is greater for a gentle curve than that for a sharp curve.
 - The centripetal acceleration is the same for both, the gentle and sharp curves.
 - The centripetal acceleration causes the object to slow down.
70. The force acting on a particle of mass m moving along the x -axis is given by $F(x) = Ax^2 - Bx$. Which one of the following is the potential energy of the particle ?
- $2Ax - B$
 - $-\frac{x^2}{6}(2Ax - 3B)$
 - $Ax^3 - Bx^2$
 - Zero
71. The symbol of SI unit of inductance is H. It stands for
- Holm
 - Halogen
 - Henry
 - Hertz
72. In a vacuum, a five-rupee coin, a feather of a sparrow bird and a mango are dropped simultaneously from the same height. The time taken by them to reach the bottom is t_1 , t_2 and t_3 respectively. In this situation, we will observe that
- $t_1 > t_2 > t_3$
 - $t_1 > t_3 > t_2$
 - $t_3 > t_1 > t_2$
 - $t_1 = t_2 = t_3$

73. Electron emission from a metallic surface by application of light is known as
- Thermionic emission
 - Photoelectric emission
 - High field emission
 - Autoelectronic emission
74. How long does light take to reach the Earth from the Sun ?
- About 4 minutes
 - About 8 minutes
 - About 24 minutes
 - About 24 hours
75. Radioactivity is measured by
- GM Counter
 - Polarimeter
 - Calorimeter
 - Colorimeter
76. The mirrors used as rear-view mirrors in vehicles are
- concave
 - convex
 - cylindrical
 - plane
77. Which one of the following waves is used for detecting forgery in currency notes ?
- Ultraviolet waves
 - Infrared waves
 - Radio waves
 - Microwaves
78. The majority charge carriers in a p-type semiconductor are
- free electrons
 - conduction electrons
 - ions
 - holes
79. The ionization energy of hydrogen atom in the ground state is
- 13.6 MeV
 - 13.6 eV
 - 13.6 Joule
 - Zero
80. When pure water boils vigorously, the bubbles that rise to the surface are composed primarily of
- air
 - hydrogen
 - hydrogen and oxygen
 - water vapour
81. Which compound, when dissolved in water, conducts electricity and forms a basic solution ?
- HCl
 - CH_3COOH
 - CH_3OH
 - NaOH

82. The principal use of hydrofluoric acid is
- in etching glass
 - as a bleaching agent
 - as an extremely strong oxidizing agent
 - in the preparation of strong organic fluorine compounds
83. The species that has the same number of electrons as $^{35}_{17}\text{Cl}$ is
- $^{32}_{16}\text{S}$
 - $^{34}_{16}\text{S}^+$
 - $^{40}_{18}\text{Ar}^+$
 - $^{35}_{16}\text{S}^{2-}$
84. The compound $\text{C}_6\text{H}_{12}\text{O}_4$ contains
- 22 atoms per mole
 - twice the mass percent of H as compared to the mass percent of C
 - six times the mass percent of C as compared to the mass percent of H
 - thrice the mass percent of H as compared to the mass percent of O
85. The proposition 'equal volumes of different gases contain equal numbers of molecules at the same temperature and pressure' is known as
- Avogadro's hypothesis
 - Gay-Lussac's hypothesis
 - Planck's hypothesis
 - Kirchhoff's theory
86. Which one of the following statements about the Ilbert Bill is correct ?
- It proposed that the Indian magistrates would try Europeans in criminal cases.
 - It allowed Indians to file criminal cases against Europeans.
 - It authorized Indian ICS officers to try Europeans in courts.
 - It was an agitation led by Ilbert in support of the nationalists.
87. Who among the following can attend the meetings of both Houses of Parliament while **not** being a member of either House ?
- The Solicitor General of India
 - The Vice-President of India
 - The Comptroller and Auditor General of India
 - The Attorney General of India

88. Who among the following was believed to be a leader of the Sanyasis and Fakirs conspiring against the British in 1857 ?
- Mangal Pandey
 - Bahadur Shah II
 - Queen Zeenat Mahal
 - Nana Sahib
89. Who among the following was the founder of the Avadh Kingdom in the 18th century ?
- Murshid Quli Khan
 - Saadat Khan
 - Alivardi Khan
 - Sarfaraz Khan
90. Who among the following was the founder of the Young Bengal Movement ?
- Henry Vivian Derozio
 - David Hare
 - Dwarkanath Tagore
 - Prasanna Kumar Tagore
91. Which one of the following statements about the Quit India Movement is **not** correct ?
- It broke out in August 1942.
 - Ahmedabad Textile Mills went on strike for more than three months.
 - Muslim League and Hindu Mahasabha actively participated in the movement.
 - Communist Party did not support the movement.
92. Who among the following is the winner of the Singapore Open Superseries Badminton Men's Singles title 2017 ?
- Kidambi Srikanth
 - Lin Dan
 - B. Sai Praneeth
 - Kento Momota
93. Koradi Thermal Power Station is located in
- Nagpur
 - Raipur
 - Mumbai
 - Secunderabad
94. Which one of the following is the theme of the International Day for Monuments and Sites (World Heritage Day) 2017 ?
- The Heritage of Sport
 - Cultural Heritage and Sustainable Tourism
 - Past and Present Heritage
 - Heritage and Science
95. In April 2017, USA dropped MOAB (Massive Ordnance Air Blast popularly known as the Mother of All Bombs) in the suspected hideouts of militants in which one of the following countries ?
- Iran
 - Syria
 - Afghanistan
 - Somalia

96. Who among the following is the Chairman of the Interdisciplinary Committee constituted recently by the Government of India to examine framework for virtual currencies ?

- (a) Secretary, Department of Financial Services
- (b) Special Secretary, Department of Revenue
- (c) Special Secretary, Department of Economic Affairs
- (d) Deputy Governor, Reserve Bank of India

97. SAMPADA scheme is being implemented by the Ministry of

- (a) Finance
- (b) Housing and Urban Affairs
- (c) Food Processing Industries
- (d) Earth Sciences

98. The shortest day length that occurs in the Northern hemisphere is on

- (a) 21st March
- (b) 23rd September
- (c) 22nd November
- (d) 22nd December

99. The Indian Railways have gone in for qualitative improvements since independence. Which of the following have taken place in recent years ?

- 1. Gauge conversion
- 2. Track electrification
- 3. Automatic signals

Select the correct answer using the codes given below :

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

100. In India, maximum amount of rainfall is received from

- (a) Western Disturbances
- (b) North-east Monsoon
- (c) South-west Monsoon
- (d) Retreating Monsoon

101. Which set of the following biosphere reserves in India is included in the World Network of Biosphere Reserves ?

- (a) Gulf of Mannar, Nokrek, Panchmarhi and Simlipal
- (b) Gulf of Mannar, Kanchanjunga, Nokrek and Seshachalam
- (c) Nilgiri, Nokrek, Panchmarhi and Panna
- (d) Nilgiri, Nokrek, Panchmarhi and Seshachalam

102. Which of the following statements about magnetite ore of iron is/are correct ?

- 1. It is known as black ore.
- 2. It contains 60% to 70% of pure iron.
- 3. It possesses magnetic properties.

Select the correct answer using the codes given below :

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

103. Which one of the following vitamins has a role in blood clotting ?
- (a) Vitamin A
 - (b) Vitamin D
 - (c) Vitamin E
 - (d) Vitamin K
104. The term 'Probiotic' is applied to
- (a) Organic food
 - (b) Antacid
 - (c) Antibiotic
 - (d) Live microbial food supplement
105. Which one of the following microbes causes acidification and curding of milk ?
- (a) Lactic Acid *Bacillus*
 - (b) *Clostridium botulinum*
 - (c) *Vibrio cholerae*
 - (d) *Saccharomyces cerevisiae*
106. Who among the following shared the Nobel Prize in 1962 along with Francis Crick and James Watson for their discoveries concerning the molecular structure of nucleic acids ?
- (a) Erwin Chargaff
 - (b) Maurice Hugh Frederick Wilkins
 - (c) Rosalind Franklin
 - (d) Phoebus Levene
107. Water boils at a lower temperature at high altitudes, because
- (a) the air pressure is less
 - (b) outside temperature is less
 - (c) latent heat is less
 - (d) None of the above
108. Concave mirror is used in headlights of vehicles, because it
- (a) focuses light from the bulb onto nearby vehicles
 - (b) sends parallel rays
 - (c) fits well into the shape of the headlight
 - (d) is cheaper than other mirrors
109. If some object is weighed when submerged in water, what will happen to its weight compared to its weight in air ?
- (a) Increase
 - (b) Decrease
 - (c) Remain exactly the same
 - (d) Increase or decrease cannot be predicted
110. Light year is a measure of
- (a) time
 - (b) distance
 - (c) total amount of light falling on the Earth in a year
 - (d) average intensity of light falling on the Earth in a year

111. Which one of the following statements about a satellite orbiting around the Earth is correct ?

- (a) Satellite is kept in orbit by remote control from ground station.
- (b) Satellite is kept in orbit by retro-rocket and solar energy keeps it moving around the Earth.
- (c) Satellite requires energy from solar panels and solid fuels for orbiting.
- (d) Satellite does not require any energy for orbiting.

112. Which one of the following statements about energy is correct ?

- (a) Energy can be created as well as destroyed.
- (b) Energy can be created but not destroyed.
- (c) Energy can neither be created nor destroyed.
- (d) Energy cannot be created but can be destroyed.

113. Step-up transformers are used for

- (a) increasing electrical power
- (b) decreasing electrical power
- (c) decreasing voltage
- (d) increasing voltage

114. Which one among the following waves carries the maximum energy per photon ?

- (a) X-rays
- (b) Radio waves
- (c) Light waves
- (d) Microwaves

115. How much CO_2 is produced on heating of 1 kg of carbon ?

- (a) $\frac{11}{3}$ kg
- (b) $\frac{3}{11}$ kg
- (c) $\frac{4}{3}$ kg
- (d) $\frac{3}{4}$ kg

116. Zinc is used to protect iron from corrosion because zinc is

- (a) more electropositive than iron
- (b) cheaper than iron
- (c) a bluish white metal
- (d) a good conductor of heat and electricity

117. Which one of the following gases is placed second in respect of abundance in the Earth's atmosphere ?

- (a) Oxygen
- (b) Hydrogen
- (c) Nitrogen
- (d) Carbon dioxide

118. Which one of the following is a chemical change ?

- (a) Cutting of hair
- (b) Graying of hair naturally
- (c) Swelling of resin in water
- (d) Cutting of fruit

119. Which one among the following chemicals is used as washing soda ?

- (a) Calcium carbonate
- (b) Calcium bicarbonate
- (c) Sodium carbonate
- (d) Sodium bicarbonate

120. Why is potassium permanganate used for purifying drinking water ?

- (a) It kills germs
- (b) It dissolves the impurities
- (c) It is a reducing agent
- (d) It is an oxidizing agent

121. Consider the following movements :

- 1. Moplah Rebellion
- 2. Bardoli Satyagraha
- 3. Champaran Satyagraha
- 4. Salt Satyagraha

Which one of the following is the correct chronological order of the above in ascending order ?

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

122. Which one of the following travelogues has given an insight on the reign of Muhammad Bin Tughlaq ?

- (a) Ibn Battuta's *Rihla*
- (b) Francois Bernier's *Travels in the Mogul Empire*
- (c) Niccolao Manucci's *Storia do Mogor*
- (d) Tavernier's *Travels in India*

123. Which one of the following was **not** a Chishti Sufi saint ?

- (a) Khwaja Moinuddin
- (b) Baba Fariduddin Ganj-i-Shakar
- (c) Nizamuddin Auliya
- (d) Shaikh Bahauddin Zakariya

124. In April 2017, India celebrated 100 years of Mahatma Gandhi's
- Satyagraha in Kheda
 - Dandi March
 - Satyagraha in Champaran
 - Return from South Africa
125. A rainbow is produced due to which one of the following phenomena ?
- Dispersion of light
 - Interference of light
 - Diffraction of light
 - Scattering of light by atmospheric dust
126. Bats detect obstacles in their path by receiving the reflected
- Infrasonic waves
 - Ultrasonic waves
 - Radio waves
 - Microwaves
127. The statement that 'heat cannot flow by itself from a body at a lower temperature to a body at a higher temperature', is known as
- Zeroth law of thermodynamics
 - First law of thermodynamics
 - Second law of thermodynamics
 - Third law of thermodynamics
128. Which one of the following waves does **not** belong to the category of the other three ?
- X-rays
 - Microwaves
 - Radio waves
 - Sound waves
129. Which one of the following statements is **not** correct ?
- Human eye is a refracting system containing a diverging lens.
 - The retina of the human eye contains millions of light sensitive cells, called *rods* and *cones*, which convert the light into electrical messages.
 - Every image that is focused on the retina is upside down.
 - We need both eyes to judge the relative positions of objects accurately.
130. Which one of the following statements is **not** correct ?
- Ultrasonic waves cannot get reflected, refracted or absorbed.
 - Ultrasonic waves are used to detect the presence of defects like cracks, porosity, etc. in the internal structure of common structure materials.
 - Ultrasonic waves can be used for making holes in very hard materials like diamond.
 - Ultrasonic waves cannot travel through vacuum.

131. According to the Travel and Tourism Competitiveness Index (TTCI) 2017 released by the World Economic Forum, among the 136 economies across the world, India ranked

- (a) 50th
- (b) 40th
- (c) 30th
- (d) 20th

132. Which one of the following is the theme of the World Health Day, 2017 celebrated by the World Health Organization ?

- (a) Diabetes
- (b) Food Safety
- (c) Depression : Let's Talk
- (d) Ageing and Health

133. Which one of the following Ministries has launched a new programme on Interdisciplinary Cyber Physical Systems (ICPS) to foster and promote R&D ?

- (a) Ministry of Earth Sciences
- (b) Ministry of Science and Technology
- (c) Ministry of Information and Broadcasting
- (d) Ministry of New and Renewable Energy

134. Consider the following statements about the Nagara style of temple architecture :

1. This style of temples are commonly found in the areas between Himalayas and Vindhya.
2. The most striking feature of this style is its pyramidal shikhara.

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

135. Ashoka's connection with Buddhism is evident from which one of the following edicts ?

- (a) Major Rock Edict 13
- (b) Rock Edict 6
- (c) Minor Rock Edict 1
- (d) Pillar Edict 4

136. The Cabinet Mission Plan for India envisaged a

- (a) Federation
- (b) Confederation
- (c) Unitary form of Government
- (d) Union of States

137. The creation of the institution of Lokpal was first recommended by

- (a) Law Commission
- (b) Santhanam Committee
- (c) Shah Commission
- (d) Administrative Reforms Commission

138. Which one of the following is a cause of acid rains ?

- (a) Ozone
- (b) Ammonia
- (c) Sulphur dioxide
- (d) Carbon monoxide

139. The desirable range of pH for drinking water is

- (a) 6.5 to 8.5
- (b) 5.0 to 6.5
- (c) 6.5 to 7.0
- (d) 7.0 to 8.5

140. Consider the following reaction :



Which of the following about the reaction given above is/are correct ?

- 1. Carbon is oxidized.
- 2. Hydrogen is oxidized.
- 3. Hydrogen is reduced.
- 4. Carbon is reduced.

Select the correct answer using the code given below :

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

141. Sunrise in eastern Arunachal Pradesh would be about how many hours before the sunrise in western Gujarat ?

- (a) One hour
- (b) Two hours
- (c) Three hours
- (d) Four hours

142. Consider the following States of India in terms of percentage of forest area in relation to the total area of the State :

1. Karnataka
2. Odisha
3. Kerala
4. Andhra Pradesh

Which one of the following is the correct descending order ?

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

143. Which one of the following States in India has the longest coastline ?

- (a) Odisha
- (b) Tamil Nadu
- (c) Karnataka
- (d) West Bengal

144. Which one of the following States in India has the largest area under forest cover ?

- (a) Maharashtra
- (b) Chhattisgarh
- (c) Madhya Pradesh
- (d) Andhra Pradesh

145. Which one of the following is **not** an igneous rock ?

- (a) Gabbro
- (b) Granite
- (c) Dolomite
- (d) Basalt

146. The Coriolis effect is the result of

- (a) Pressure gradient
- (b) Earth's axis of inclination
- (c) Earth's rotation
- (d) Earth's revolution

147. Where is Mekong Delta located ?

- (a) Thailand
- (b) Cambodia
- (c) Myanmar
- (d) Vietnam

148. Which one of the following pairs of rivers and tributaries is **not** correctly matched ?

- (a) Godavari : Indravati
- (b) Ganga : Penganga
- (c) Krishna : Bhima
- (d) Luni : Sukri

149. Consider the following characteristics of a tropical cyclone :

1. A warm sea temperature of $> 26^{\circ}\text{C}$
2. High relative humidity of atmosphere at a height of $> 700\text{ m}$
3. Atmospheric instability

The above mentioned characteristics are associated with which one of the following cycles of its development ?

- (a) Formulation and initial stage
- (b) Modification stage
- (c) Full maturity
- (d) Decay

150. In the Mesopotamian records, which one of the following terms was used for the Indus Valley (Harappans) ?

- (a) Dilmun
- (b) Meluha
- (c) Magan
- (d) Failaka