

1. A man walks 45m towards south in a straight line and turns to east and walks straight to stop at a point whose distance from the point where he turns east is 60m. The difference between the distance and displacement travelled by the man when he stops at the point is :  
(A) 105m (B) 30m  
(C) 40m (D) 35m
2. A ray of light strikes a plane mirror in  $90^\circ$ . Then, the sum of the incident angle and reflected angle is :  
(A)  $0^\circ$  (B)  $90^\circ$   
(C)  $180^\circ$  (D)  $45^\circ$
3. The farthest planet from earth visible to the naked eye is :  
(A) Neptune (B) Uranus  
(C) Saturn (D) Jupiter
4. Which of the following sets of diseases is caused by virus only?  
(A) dysentery, pneumonia, measles, chicken pox  
(B) small pox, typhoid, common cold, dysentery  
(C) AIDS, diphtheria, chicken pox, common cold  
(D) common cold, measles, chickenpox, AIDS
5. The various compounds present in coal tar are separated by :  
(A) Simple distillation  
(B) Fractional distillation  
(C) Centrifugation  
(D) Decantation
6. When the amplitude of vibration is decreased, the loudness of sound :  
(A) increases  
(B) decreases  
(C) remains unaffected  
(D) sometimes increases and sometimes decreases depending upon the situation
7. In a game of tug of war between two teams A and B the rope broke at a point which is nearer to A. Then which of the following is correct ?  
(A) A has applied more force.  
(B) B has applied more force.  
(C) A and B both have applied same force  
(D) A and B have not applied any force
8. Fertilisation takes place in :  
(A) Amoeba (B) paramecium  
(C) starfish (D) none of the above
9. The shooting stars are :  
(A) the stars that are nearer to our earth  
(B) the stars that are very far away from our earth  
(C) meteors  
(D) asteroids
10. Mad cow disease affects  
(A) central nervous system  
(B) circulatory system  
(C) digestive system  
(D) respiratory system
11. Choose the correct statement  
(A) warm air can hold more water than cool air  
(B) cool air can hold more water than

→

- (C) iii and i only (D) i, ii and iii
32. Which of the following was not included in the Wildlife Protection Act 1972 in its original form ?  
(A) mammals (B) amphibians  
(C) reptiles (D) none of the above
33. The force exerted on a circular region of radius 70cm is 30 N. The pressure is :  
(A)  $21.98\text{N/m}^2$  (B)  $0.19\text{N/m}^2$   
(C)  $16.78\text{N/m}^2$  (D)  $19.48\text{N/m}^2$
34. Pancrease is an  
(A) endocrine gland  
(B) exocrine gland  
(C) both A and B  
(D) none of the above
35. The distance of Alpha Centauri from the Earth is :  
(A)  $3.5 \times 10^{13}\text{ Km}$  (B)  $4.07 \times 10^{13}\text{ Km}$   
(C)  $4.39 \times 10^{13}\text{ Km}$  (D)  $5.3 \times 10^{13}\text{ Km}$
36. PVC is an example of :  
(A) thermosetting plastic  
(B) thermoplastic  
(C) artificial fibre  
(D) none of the above
37. Choose the correct option :  
(A) protons and neutrons attract each other when the distances among them are extremely small.  
(B) protons and neutrons attract each other when the distances among them are extremely large.  
(C) protons and neutrons repel each other when the distances among them are extremely small.  
(D) protons and neutrons repel each other when the distances among them are extremely large.
38. Blind spot is found in :  
(A) Iris (B) cornea  
(C) Retina (D) pupil
39. There are three solutions A, B and C containing vinegar, sugar and copper sulphate respectively. The solution which can conduct electric current is :  
(A) A and B (B) B and C  
(C) A and C (D) A, B, C
40. Red Data Book is founded by  
(A) WWF (B) UNEP  
(C) IUCN (D) UNO
41. Choose the correct sequence :  
(A) embryo → zygote → foetus  
(B) embryo → foetus → zygote  
(C) zygote → embryo → foetus  
(D) foetus → embryo → zygote
42. Factors affecting sliding frictions are  
(i) weight  
(ii) stickiness of the two surfaces  
(iii) surface area  
(A) i (B) i, ii  
(C) i, iii (D) i, ii, iii
43. Which one is hotter - the surface of the sun (A) and the air in the core of a lightning bolt (B) ?  
(A) A is ten times hotter than B  
(B) A is six times hotter than B  
(C) B is six times hotter than A  
(D) B is ten times hotter than A
44. Assertion : Women should not be blamed for the birth of a baby girl.  
Reason : Father is responsible for the sex of a baby.

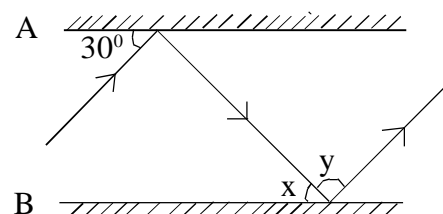
- (C) 4 (D) 5
23. Match column A and column B
- |                       |                             |
|-----------------------|-----------------------------|
| Column A<br>(animals) | Column B<br>(audible range) |
| i) dog                | a) 20Hz to 20KHz            |
| ii) bat               | b) 20Hz to 120KHz           |
| iii) mice             | c) 40Hz to 60 KHz           |
| iv) human being       | d) 1KHz to 70KHz            |
| (A) i ii iii iv       | (B) i ii iii iv             |
| b c d a               | a b c d                     |
| (C) i ii iii iv       | (D) i ii iii iv             |
| c b d a               | a d b a                     |
24. Assertion : Cars are given streamlining to increase the speed of vehicle.  
Reason : Air friction decreases due to streamlining.  
(A) Both Assertion and Reason are true. Reason is the correct explanation of Assertion.  
(B) Both Assertion and Reason are true. Reason is not the correct explanation of Assertion.  
(C) Assertion is true and Reason is false  
(D) Both Assertion and Reason are false.
25. Paper should be recycled :  
(A) to save trees  
(B) to prevent soil pollution  
(C) to control the amount of garbage produced  
(D) all the above
26. The frequency used in a medical diagnostic ultrasound is 8MHz. The time period of a vibration is :  
(A)  $8 \times 10^6$  sec (B)  $8 \times 10^{-6}$  sec  
(C)  $1.25 \times 10^{-6}$  sec (D)  $1.25 \times 10^{-7}$  sec
27. The fuels having \_\_\_\_ ignition temperatures are very dangerous to use.  
(A) high (B) very high  
(C) very low  
(D) both (A) and (B)
28. Which of the following cells is said to be amoeboid?  
(A) WBC (B) mesophyll cells  
(C) nerve cells (D) RBC
29. Choose the correct option :  
(i) displacement is always less than distance.  
(ii) displacement and distance may not be equal.  
(iii) displacement is always less than or equal to distance.  
(iv) displacement is always greater than or equal to distance  
(A) i & ii (B) ii & iv  
(C) ii & iii (D) i only
30. Lightning rods are also known as :  
(A) lightning control devices  
(B) strike termination devices  
(C) lightning safety divices  
(D) electrical safety divices
31. Which of the following happens when a wax candle is burnt ?  
(i) fuel undergoes oxidation  
(ii) Liberation of heat and high energy  
(iii) Release of water vapour and carbondioxide  
(A) i and ii only (B) ii and iii only

- warm air  
(C) warm and cool air can hold the same amount of water  
(D) warm air can't hold water
12. The units of inheritance are found in :  
(A) chromosome (B) chloroplast  
(C) mitochondria (D) cytoplasm
13. Choose the correct statement :  
i) The seismic wave can't shake the earth as it moves through it due to the large size of the earth.  
ii) The speed of earthquake wave is unaffected by the rock type.  
iii) S waves travel between 3.5 and 7.5km/sec.  
iv) P waves are similar to sound waves.  
(A) i, ii, iii (B) ii, iii, iv  
(C) iii, iv (D) ii, iii
14. White rust of mustard is caused by :  
(A) virus (B) bacteria  
(C) fungus (D) protozoa
15. Pengba is :  
(A) Monopterus albus  
(B) Cyprinus carpio  
(C) Osteobrama belangeri  
(D) Labeo bata
16. When a ray of light travels from air medium to water medium, the path of the light ray :  
(A) bends away from the normal  
(B) bends towards the normal  
(C) is not deviated from the path of the incident light  
(D) is curve in nature
17. The energy stored in a stretched rubber is :  
(A) kinetic energy  
(B) electrical energy  
(C) magnetic energy  
(D) potential energy
18. On a rough surface, when does a body have zero force of friction ?  
(A) When no force is applied on it.  
(B) when large force is applied on it.  
(C) when the body is rolling on the surface  
(D) when the body is sliding on the surface
19.  $\text{Mg}(\text{OH})_2$  turns  
(A) blue litmus to red  
(B) red litmus to blue  
(C) blue litmus to red and then to blue again  
(D) red litmus to blue and then to red again
20. Match column A and B
- |                              |                            |
|------------------------------|----------------------------|
| Column A<br>(animal product) | column B<br>(% of protein) |
| i) Egg                       | a) 4.00                    |
| ii) meat                     | b) 13.00                   |
| iii) fish                    | c) 21.10                   |
| iv) milk                     | d) 19.00                   |
| (A) i ii iii iv              | (B) i ii iii iv            |
| c a b d                      | b c d a                    |
| (C) i ii iii iv              | (D) i ii iii iv            |
| a b c d                      | d b a c                    |
21. The ecliptic is the path that the \_\_\_\_ traces out on the celestial sphere  
(A) Earth (B) venus  
(C) moon (D) sun
22. The number of bright stars which represents the belt of the hunter is :  
(A) 2 (B) 3

- (A) Both Assertion and Reason are true. Reason is the correct explanation of Assertion.  
 (B) Both Assertion and Reason are true. Reason is not the correct explanation of Assertion.  
 (C) Assertion is true and Reason is false  
 (D) Both Assertion and Reason are false.
45. The Magdeburg hemispheres are used to demonstrate :  
 (A) the existence of atmospheric pressure  
 (B) the power of atmospheric pressure  
 (C) the atmospheric pressure is extremely low  
 (D) the atmospheric pressure is negligible
46. Choose the correct reaction :  
 (A)  $2\text{Fe} + 2\text{HCl} \rightarrow 2\text{FeCl} + \text{H}_2$   
 (B)  $\text{Fe} + 2\text{HCl} \rightarrow \text{FeCl}_2 + \text{H}_2$   
 (C)  $4\text{Fe} + 6\text{HCl} \rightarrow 2\text{Fe}_2\text{Cl}_3 + 3\text{H}_2$   
 (D)  $3\text{Fe} + 2\text{HCl} \rightarrow \text{Fe}_3\text{Cl}_2 + \text{H}_2$
47. In solution containing salt, the electric current is conducted by  
 (A) electrons (B) atoms  
 (C) ions (D) Both A and B
48. Match column A and column B
- | Column A                  | Column B            |
|---------------------------|---------------------|
| i) seasonal migration     | a) Graylag geese    |
| ii) latitudinal migration | b) California Gulls |
| iii) Longitudinal         | c) Willows          |

- migration  
 iv) altitudinal migration  
 (A) i ii iii iv  
 b d a c  
 (C) i ii iii iv  
 c b d a
- d) Cuckoos  
 (B) i ii iii iv  
 d b a c  
 (D) i ii iii iv  
 d a b c

49. In the figure two plane mirrors A and B are kept parallel. A ray of light is incident on the mirror A as shown in the figure



Then,  $x + y$  is equal to :

- (A)  $120^\circ$  (B)  $130^\circ$   
 (C)  $150^\circ$  (D)  $160^\circ$
50. Who was the scientist who saw a live cell first ?  
 (A) Robert Hooke  
 (B) Anton Von Leeuwenhoek  
 (C) Robert Brown  
 (D) Benjamin Franklin

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## 25<sup>th</sup> MVIII (SCIENCE)

Time Allowed 1 hour

Maximum Marks : 100

**Read the following instructions carefully before you begin to answer the questions.**

- This booklet contains 50 questions in all.
- All questions are compulsory and each question carries 2 marks.
- Before you start to answer the questions you must check up this booklet and ensure that it contains all the pages 5 (Five) and see that no page is missing or repeated. If you find any defect in this Booklet, you must replace it immediately.
- There will **NOT** be any negative marking for wrong answers.
- You are required to fill the information on the answer sheet which you will get in the examination hall by **H.B. pencil or BALL point pen**.
- Answer Sheet** and **Question Paper** will be supplied in examination hall. After the test is over, you should hand over the answer sheet to the invigilator before leaving the room.
- You should write your **Name, Roll No.**, carefully on the space provided in the answer sheet. Otherwise you will be awarded **ZERO** mark.
- If you wish to change your answer, **ERASE** completely the darkened circle by using an **ERASER** and then blacken the new circle. If not erased completely, smudges will be left on the erased circle and the question will be read as having two answer and will be ignored for giving any credit.
- Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any question.
- You are not allowed to leave the examination hall until you are advised to do so by the invigilator.