

Roll No:

Total printed pages : 02

PHYSICS (Time : 1 hr. ; M. Marks : 30)

MULTIPLE CHOICE QUESTIONS :

(1x6=6 marks)

1. In which medium does sound travel fastest?
a) Air b) Vacuum c) Water d) Steel
2. The hottest planet in the solar system is
a) Mercury b) Venus c) Earth d) Mars
3. Which of the following is the largest asteroid?
a) Sputnik b) Aryabhata c) Ceres d) Halley
4. Sound of which of the following frequency can you hear?
a) 5Hz b) 15Hz c) 400Hz d) 50000Hz
5. Which of these is expected to be the best absorber of sound?
a) Cemented wall b) Iron c) Wool d) All of these
6. Which star seems to be stationary when seen from the earth?
a) Ursa Major b) Cassiopeia c) Sirius d) Polestar
7. How does a lightning conductor work? (2)
8. What is Richter scale? Why do we say that it is not a linear scale? (2)
9. Define electroplating. What are the advantages of electroplating iron with Chromium? (2)
10. State any four uses of artificial satellites. (2)
11. Differentiate between stringed, wind and percussion instruments. (3)
12. Draw a circuit diagram showing a dry cell connected to a bulb through a switch. Mark the positive and negative terminal of the cell and show the flow of conventional and electronic current. (3)
13. a) Write an activity to show that sound cannot travel through vacuum.
b) In what way loudness of sound depends on amplitude. If amplitude increases four times then by how many times does loudness increase? (3+2)
14. a) Show the position of main stars in Ursa Major.
b) Explain the phases of moon. (2+3)

CHEMISTRY (Time : 1 hr. ; M. Marks : 30)

MULTIPLE CHOICE QUESTIONS :

(1x6=6 marks)

1. Which of the following is not obtained as a fraction during the refining of petroleum?
a) Kerosene b) Natural Gas c) Lubricating oil d) Bitumen
2. Coal mainly contains:
a) Carbon b) Carbon and Hydrogen
c) Carbon, Hydrogen and Nitrogen d) Carbon, Nitrogen and Oxygen
3. Which poisonous gas is formed as a result of incomplete combustion?
a) Coal gas b) Carbon monoxide c) Carbon dioxide d) Nitrogen oxide
4. Which compound is added to petrol to prevent engine from 'Knocking' causes pollution of air?
a) Lead b) Carbon c) Sulphur d) Carbon dioxide.
5. Which of the following compound damage the ozone layer in the atmosphere?
a) Chlorofluorocarbons b) Petroleum c) Nitrogen oxide d) Natural Gas
6. Which of the following is not a greenhouse gas?
a) Carbon dioxide b) Nitrous oxide c) Methane d) Nitrogen
7. Define Ignition temperature. (1)
8. a) Write the properties and composition of Magnalium.
b) Give the names and composition of alloys are used for the following:
i) Joining wires in electronic equipments.
ii) Making surgical instruments. (2)
9. a) What are the harmful effects of acid rain?
b) Why is CNG preferred to other fuels for motor vehicles? (2)

10. a) Write a short note on non-luminous zone.
 b) What are the characteristics of a good fuel?
 c) What do you mean by Spontaneous Combustion? (3)
11. a) What are the advantages of using energy judiciously?
 b) Distinguish between renewable and non-renewable resources?
 c) How is coke obtained? (3)
12. Complete and balance the following equation:
 a) $\text{Fe} + \text{CuSO}_4 \rightarrow$
 b) $\text{Al} + \text{H}_2\text{O} \rightarrow$
 c) $\text{Na} + \text{HCl} \rightarrow$ (3)
13. a) Give reason:
 i) Paper cup with water in it does not burn.
 ii) Hydrogen is expected to be the fuel of the future.
 b) What are the effects of global warming?
 c) Draw a neat and a labelled diagram for Soda-acid fire extinguisher.
 Write the chemical reaction involved. (5)
14. a) Name the following:
 i) The variety of coal with maximum carbon content.
 ii) Fuel used in jet aeroplanes.
 iii) Petroleum product used for road surfacing.
 iv) Process of conversion of wood into coal is called_____.
 v) Material which is called 'black gold'.
 vi) Important source from which naphthalene balls are obtained from_____.
 b) Draw a neat and labelled diagram for the destructive distillation of coal. (3+2)

BIOLOGY (Time : 1 hr. ; M. Marks : 30)**MULTIPLE CHOICE QUESTIONS :**

(1x6=6 marks)

1. Plants found in a particular area are known as
 a) Flora b) fauna c) vulnerable d) biosphere
2. WWF works in the field of
 a) wildlife conservation b) forest conservation
 c) child labour d) water conservation
3. Which of the following is a hermaphrodite animal?
 a) Frog b) Cow c) Earthworm d) Dog
4. The fusion of sperm and egg produces
 a) larva b) pupa c) embryo d) zygote
5. Which combination of sex chromosomes is present in a female?
 a) XX b) XY c) YY d) none of these
6. Which of these is called the master gland?
 a) Pancreas b) Pituitary c) Testes d) Thyroid

SHORT ANSWER QUESTIONS :

(2x7=14 marks)

7. Differentiate between endemic and extinct species.
8. Define menarche and menopause.
9. How is sexual reproduction different from asexual reproduction?
10. What method of irrigation will you use if you live in a dry area with shortage of water? Explain the method.
11. What precautions must be kept in mind while sowing seeds in a field? (any two)
12. State a difference between a zoo and a wild life sanctuary.
13. List the various stages in the life cycle of : (i) a mosquito (ii) a frog

LONG ANSWER QUESTIONS

(2x5=10 marks)

14. Explain how amoeba and hydra reproduce with the help of respective diagrams.
15. Name the endocrine gland which secrete the following hormone and state the function of each
 a) insulin b) thyroxine c) adrenalin
 d) testosterone e) oestrogen