

KHYBER PAKHTUNKHWA, PUBLIC SERVICE COMMISSION

COMPETITIVE EXAMINATION FOR THE POST OF PROVINCIAL MANAGEMENT SERVICES (BPS-17).

2013

General Knowledge (Every Day Science)

TIME ALLOWED: 03 HOURS

MAX. MARKS: 100

Note: Attempt any TEN questions. All questions carry equal marks.

- Q.1** Write short notes on any TWO of the following: (05 marks each)
(a) Telecommunication (b) Photosynthesis (c) Nanotechnology
- Q.2** Muslim scientists played an important role in the evolution and development of science. Explain. (10 marks)
- Q.3** Where does "Ozone layer" lie in atmosphere? How it is depleting and how we can prevent its depletion? (10 marks)
- Q.4(a)** Define Acid rain. How it forms and what are its effects? (05 marks)
- (b)** State how your city or village is an "Ecosystem" and describe your position and role in that ecosystem. (05 marks)
- Q.5** Differentiate between any FIVE of the following: (02 marks each)
(a) Asteroid and meteorite (b) Cartilage and bone (c) Fission and fusion
(d) Absorption and adsorption (e) Ghee and oil (f) RAM and ROM
- Q.6** Write briefly about any FIVE of the following: (02 marks each)
(a) Cosmic Rays (b) Condensation (c) Artificial Radioactivity
(d) Isotopes (e) Biological evolution (f) Microcontroller
- Q.7** Briefly account for (02 marks each)
(a) What is "Mirage"?
(b) Why do we perspire before rain?
(c) How does microwave oven cook?
(d) Why is it easier to roll a barrel than to pull it?
(e) Why do gardeners use the method of cutting and grafting?
- Q.8** Choose the correct answer (01 mark each)
- (i) The famous book; Al-Qanoun was written by the Muslim scientist:
(a) Jabar bin Hayyan (b) Zakariya Al-Razi (c) Abu Ali Sina (d) Abdul Qasim Majreeti
- (ii) Coulomb is the scientific unit to measure:
(a) Mass (b) Velocity (c) Temperature (d) None of these
- (iii) Amino acids are the organic compound behaving like:
(a) Acid (b) Base (c) Both (a) and (b) (d) None of these
- (iv) Animals obtain Carbohydrates mainly from:
(a) Sucrose (b) Glycogen (c) Starch (d) Glucose
- (v) The study of fossils and their relationship to the evolution of life on earth is called:
(a) Fossilization (b) Paleontology (c) Palaeozoology (d) None of these
- (vi) One of the main functions of the of earth's ozone layer is to:
(a) Prevent global warming (b) Filter out UV rays (c) Absorb pollution (d) All of these
- (vii) The internal resistance of a liquid to flow is called:
(a) Surface tension (b) Isomorphism (c) Viscosity (d) Allotropy
- (viii) When all access and processing is done in one location, a computer system is said to be:
(a) Networked (b) Distributed (c) Centralized (d) Linked
- (ix) The type of modulation that changes the height of the signal is called:
(a) Frequency (b) Phase (c) Amplitude (d) Height
- (x) If a person eats more protein than are needed, this causes increased production of:
(a) Hormones (b) Urea (c) Lactic acid (d) None of these
- Q.9** Briefly account for (02 marks each)
(a) What is hepatitis?
(b) Why do stars twinkle?
(c) Why are cloudy nights generally warm?
(d) Why there is a small space between the joints of railway tracks?
(e) Why pure water is not a strong electrolyte?
- Q.10** Write briefly about any FIVE of the following: (02 marks each)
(a) Entropy (b) Crystalline solids (c) Escape Velocity
(d) Vaccines (e) Natural gas (f) Microcomputer
- Q.11** Differentiate between any FIVE of the following: (02 marks each)
(a) Stars and Planets (b) Autopsy and biopsy (c) Alloy and Amalgam
(d) Normal salt and Basic salt (e) Hardware and Software (f) Crude oil and residual oil
- Q.12(a)** What are the Optical fibers and on which principle they work? Describe their few uses. (05 marks)
- (b)** What is the significance of Vitamins? Describe the sources, uses and deficiency symptoms of fat soluble vitamins. (05 marks)