



# FEDERAL PUBLIC SERVICE COMMISSION

Roll Number

## COMPETITIVE EXAMINATION- 2004 FOR RECRUITMENT TO POSTS IN BS-17 UNDER THE FEDERAL GOVERNMENT

GENERAL KNOWLEDGE-I (GENERAL SCIENCE & ABILITY)

<b>TIME ALLOWED: THREE HOURS</b>	<b>PART-I (MCQS)</b>	<b>MAXIMUM MARKS = 20</b>
<b>PART-I(MCQS): MAXIMUM 30 MINUTES</b>	<b>PART-II</b>	<b>MAXIMUM MARKS = 80</b>
<b>NOTE: (i) Part-II is to be attempted on the separate Answer Book.</b> <b>(ii) Attempt ONLY FOUR questions from PART-II. ALL questions carry EQUAL marks.</b> <b>(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.</b> <b>(iv) Write Q. No. in the Answer Book in accordance with Q. No. in the Q.Paper.</b> <b>(v) No Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.</b> <b>(vi) Extra attempt of any question or any part of the question will not be considered.</b>		

**Q1. Write short notes on any two of the following:**

a. superconductivity b. Night Vision Technology c. Seismograph

**Q2. Briefly write down characteristics of:**

a. Mercury b. Pluto

**Q3. Name:**

- a. The desert mammal which does not drink water.....
- b. The mixture which can dissolve platinum.....
- c. The constituent elements of Bronze.....
- d. The vitamin whose deficiency causes a disease called beriberi.....
- e. The electrical device which transform voltage.....
- f. A nuclear reaction in which two or more than two lighter nuclear are fused together to form a relatively heavier one : nuclear fusion
- g. The purest naturally occurring crystalline form of carbon.....
- h. The hormone secreted by adrenal cortex.....
- i. The three colours combination which produces the sensation of white light.....
- j. The defect of vision because of which a person cannot see distant objects clearly.....

**Q4. What are fertilizers ? what do you understand by the term NPK fertilizer? How do fertilization contribute to the pollution?**



**Q5. Write briefly about any five of the following:**

- a. Nuclear radiation b. Theodolite c. Dialysis d. Enrichment of Uranium e. Richter Scale f. Aqua regia
- g. Iodized salt

**Q6. Which physical quantities are measured by the following units?**

- a. Rutherford b. Torr c. Fermi d. Svedberg unit e. Dioptre f. Mho g. Henry h. Maxwell i. Becquerel j. Kilo watt hour

**Q7. What are the various sources of energy ? How does energy is produced in the surface of the sun ? what will be the future of the sun ?**

**Q8. Which are the following statements true and which are false ?**

- a. A six feet tall lady can see her full image in a three feet Plane Mirror
- b. Vanadium, a steel gray corrosion resistant metal occur naturally in oxide state
- c. Fibre optics cable carries data in the form of light
- d. Blue flame is hotter than red flame
- e. The falling of yellow leaves during autumn is the seasonal time for plants to get rid of accumulated wastes
- f. Friction is necessary evil
- g. There are  $9.5 \times 10^{15}$  m in one light year.
- h. The velocity of a moving object is least where the pressure is greatest
- i. Heat reaches earth from the sun by means of convection
- j. Meningitis is the inflammation of liver

**Q9. Differentiate between the following pairs**

- a. periscope & pyrometer
- b. cell & battery
- c. perimeter & altimeter
- d. pelage and plumage
- e. smog and smoke

**Q10 fill in the blanks**

- a. the largest planet of solar system is \_\_\_\_\_
- b. the temperature of the dead human body on Celsius scale is \_\_\_\_
- c. For a large span of a long jump, two things are taken into account viz i angle with which one jumps and ii \_\_\_\_\_
- d. the number of the spinal nerves in the man is \_\_\_\_\_ pairs
- e. a primary cell can \_\_\_\_\_ be charged again
- f. Halos around the moon are formed because of the phenomenon of \_\_\_\_\_
- g. Scattering of light \_\_\_\_\_ the duration of the day
- h. Muscle stiffness is caused by a disease called \_\_\_\_\_
- i. Oil rises in a wick of oil lamp on account of a property of matter called \_\_\_\_\_
- j. Muslim scientist Ali al Tabari is famous for his work on \_\_\_\_\_



**Q11. Give scientific reason of the following**

1. rain water is more fertile than water from tube well
2. the man-hole covers are generally round
3. clothes of a moving dancer bulge
4. peoples are advised not to stand near a fast moving train
5. the image of a tree looks inverted on the bank of a lake

**Q12. why are the scientists worried about the increase of carbon dioxide gas in the atmosphere ?  
is there any possible benefit for the mankind in case of global warming ?**

**Q13. what do the following scientific abbreviations stand for?**

a. STP b. ATP c. PNP d. LAN e. KWh f. BTU g. LDL h. ROM i. MAF j. SONAR

**Q14. Match the column A and B but write the answers serial wise in column C**

S.No. Column A Column B Column C

A Frank whittle Fission C

B Addison Electricity

C Hahn Genetics

D Mendel Lightning conductor

E Benjamin Franklin Semiconductor

F Bardeen & Brattin Uncertainty principle

G Heisenberg Jet engine

H Fermi Cyclotron I Length

I Lawrence Electromagnetic waves

J Maxwell Hertz Fusion

Column C

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

1. Choose the best choice in the following statements
2. the three elements needed for healthy growth of plants are : a. N, P, K b. N, C, P c. N, K, C d. N, S, P
3. the most abundant element in the human body is : a. Carbon b. Hydrogen c. Oxygen d. Nitrogen



4. ammonium nitrate is not used for : a. Rice crop b. wheat crop c. sugarcane crop d. cotton crop
5. sea divers use a mixture of gases for breathing during diving. The mixture is : a. 80% He & 20%O<sub>2</sub> b. 80% N<sub>2</sub> & 20% O<sub>2</sub> c. 20%O<sub>2</sub> & 40% N<sub>2</sub> 40% CO<sub>2</sub> d. 50% He & 50% O<sub>2</sub>
6. Which one of the following is a water soluble vitamin a. Niacin b. Ascorbic acid c. trypsin d. riboflavin
7. Which of the following enzymes bring about hydrolysis of fats ? a. urease b. zymase c. maltase d. lipase
8. the solution of which acid is used for seasoning of food : a. formic acid b. acetic acid c. benzoic acid d. botanic acid
9. influenza is caused by : a. fungi b. bacteria c. virus d. protozoa
10. the blood glucose level is raised by the following except : a. carbohydrates b. cholesterol c. insulin d. epinephrine
11. The energy possessed by water in a dam is : a. Electrical energy b. Kinetic energy