



FEDERAL PUBLIC SERVICE COMMISSION  
COMPETITIVE EXAMINATION FOR  
RECRUITMENT TO POSTS IN BPS-17 UNDER  
THE FEDERAL GOVERNMENT, 2009  
**GENERAL KNOWLEDGE PAPER-I**  
**(EVERY DAY SCIENCE)**

S.No.	
R.No.	

TIME ALLOWED:	(PART-I) 80 MINUTES	MAXIMUM MARKS:50
	(PART-II) 100 MINUTES	MAXIMUM MARKS:50

- NOTE:**
- First attempt **PART-I (MCQ)** on separate **Answer Sheet** which shall be taken back after **80 minutes**.
  - Overwriting/cutting of the options/answers will not be given credit.**

**PART – I (MCQs)**  
**(COMPULSORY)**

**Q.1. Select the best option/answer and fill in the appropriate Box on the Answer Sheet: (50)**

- Persons with following blood group are considered to be universal recipient.  
(a) A+ (b) B+ (c) AB+ (d) O+ (e) None of these
- Study of life in outer space is known as:  
(a) Endobiology (b) Exobiology (c) Enterobiology (d) Neobiology (e) Micro biology
- The name of the common mineral salt present in sweat is:  
(a) Calcium Oxalate (b) Potassium Sulphate (c) Sodium Chloride (d) Iron Sulphide  
(e) None of these
- Sensitive layer of the eye is:  
(a) Choroids (b) Sclerotic (c) Retina (d) Cornea (e) None of these
- Laughing gas has chemical composition of following two elements:  
(a) Nitrogen + Hydrogen (b) Nitrogen + Carbon (c) Nitrogen + Oxygen  
(d) Oxygen + Carbon (e) None of these
- Dr. Abdus Salam of Pakistan was one of the contributors to the unification of:  
(a) Electromagnetic force and gravitational force (b) Electromagnetic force and weak nuclear force  
(c) Gravitational force and weak nuclear force (d) Weak nuclear force and strong nuclear force  
(e) None of these
- Which triplet in DNA codes for valine:  
(a) CTT (b) AGU (c) CAT (d) AAT (e) None of these
- What is the chance of a diabetic baby born to parents both heterozygous normal?  
(a) Zero (b) 1/4 (c) 1/2 (d) 3/4 (e) None of these
- Which of the following is not a part of Darwinism:  
(a) Over production (b) Natural selection (c) Inheritance for acquired characters  
(d) Competition for survival (e) None of these
- Role of biotechnology in the production of food is based on:  
(a) Decomposition (b) Respiration (c) Digestion (d) Fermentation (e) None of these
- Which form of drug abuse involves most risk of infection with the HIV (AIDS) virus:  
(a) Cigarette smoking (b) Using alcohol (c) Injection of heroine  
(d) Taking too much aspirin (e) None of these
- Founder of modern astronomy was:  
(a) Archimedes (b) William Gilbert (c) Nicolas Copernicus  
(d) Michel Faraday (e) None of these
- The instrument which measures very high temperature is:  
(a) Manometer (b) Thermostat (c) Chronometer (d) Pyrometer (e) None of these
- The science which deals with study of manners and customs of peoples is:  
(a) Ethnology (b) Morphology (c) Ethics (d) Genetics (e) None of these
- Chemicals used to kill rats and mice are:  
(a) Insecticides (b) Rodenticides (c) Fungicides (d) Herbicides (e) None of these
- Dry ice is:  
(a) Methane hydrate (b) Liquid Nitrogen (c) Solid Carbondioxide  
(d) Frozen water (e) None of these
- Chemical name of vinegar is:  
(a) Sodium Nitrate (b) Dilute acetic acid (c) Chloride of lime  
(d) Calcium (e) None of these
- Deficiency of following vitamin decreases hemoglobin production:  
(a) Biotin (b) Thiamine (c) Niacin (d) Pyridoxine (e) None of these
- Hygrometer is used for measuring the:  
(a) Speed of sound (b) Density of milk (c) Humidity of air  
(d) Specific gravity of liquids (e) None of these

- (20) Bronze is an alloy of:  
 (a) Copper and Zinc (b) Tin and Zinc (c) Copper and Tin  
 (d) Iron and Zinc (e) None of these
- (21) Which of the following is most elastic?  
 (a) Steel (b) Rubber (c) Glass (d) Sponge (e) None of these
- (22) Orbital period of the planet Mercury around the sun is:  
 (a) 88 days (b) 365 days (c) 2 years (d) 98 days (e) None of these
- (23) The most splendid and the most magnificent constellation in the sky is:  
 (a) Orion (b) Columba (c) Canis Major (d) Taurus (e) None of these
- (24) "Black holes" refer to:  
 (a) Holes occurring in heavenly bodies (b) Bright spots on the sun  
 (c) Collapsing objects of high density (d) Collapsing objects of low density  
 (e) None of these
- (25) Eugenics is the study of:  
 (a) Altering human beings by changing their genetic components  
 (b) People of European origin (c) Different races of mankind  
 (d) Genetics of plants (e) Eunuchs
- (26) The position of earth in its orbit, when it is at its greatest distance from the sun causing northern summer is called:  
 (a) Aphelion (b) Perihelion (c) Perigee (d) Apogee (e) None of these
- (27) Diamond is a very expensive ornament. It is composed of a single element.  
 (a) Carbon (b) Gold (c) Silver (d) Platinum (e) None of these
- (28) Which of the following layers makes radio transmission possible?  
 (a) Troposphere (b) Ionosphere (c) Mesosphere (d) Stratosphere (e) None of these
- (29) Which of the following explains the reason why there is no total eclipse of the sun?  
 (a) Size of the earth in relation to that of moon (b) Orbit of moon around earth  
 (c) Direction of rotation of earth around sun (d) Area of the sun covered by the moon  
 (e) None of these
- (30) Television signals are converted into light signals by:  
 (a) Optical fibre (b) Transistor (c) Decoder (d) Photo diode (e) None of these
- (31) Where do most of Asteroids lie?  
 (a) In asteroid belt between the orbits of Mars and Jupiter.  
 (b) In asteroid belt between the orbits of Mars and Venus.  
 (c) In asteroid belt between the orbits of Jupiter and Venus.  
 (d) Everywhere in the sky. (e) None of the these
- (32) The number of spark plugs needed in a diesel engine is:  
 (a) 2 (b) 3 (c) 0 (d) 4 (e) None of these
- (33) The half life of a radioactive element is 8-days. How long will it take to reduce it from 10mg to 5mg?  
 (a) 4 days (b) 12 days (c) 16 days (d) 8 days (e) None of these
- (34) The term 'Blue Shift' is used to indicate.  
 (a) Doppler effect in which an object appears bluer when it is moving towards the observer or observer is moving towards the object.  
 (b) Turning a star from white to blue. (c) In future sun would become blue.  
 (d) Black hole was blue at its start. (e) None of these
- (35) Kilowatt-hour is a unit of:  
 (a) Power (b) Electric current (c) Energy (d) Time (e) None of these
- (36) Fuel used in Fast Breeder Reactor is:  
 (a) Uranium Oxide (b) Uranium Plutonium carbide (c) Uranium Plutonium Oxide  
 (d) Uranium thorium Oxide (e) None of these
- (37) Monsoon is caused by:  
 (a) Seasonal reversal of winds. (b) Revolution of earth. (c) Movement of the clouds.  
 (d) Rise in temperature. (e) Rain forests
- (38) Which of the following atmospheric layers helps in radio communication?  
 (a) Exosphere (b) Ionosphere (c) Troposphere (d) Stratosphere (e) Ozone layer
- (39) A moderator is used in nuclear reactor in order to:  
 (a) Accelerate the neutrons (b) Slow down the speed of the neutrons  
 (c) Increase the number of electrons (d) Decrease the number of electrons  
 (e) None of these
- (40) Sedimentary rocks are:  
 (a) Porous (b) Hard (c) Rough (d) Brittle (e) Volcanic
- (41) Which one of the following is a non-metallic mineral?  
 (a) Manganese (b) Magnesium (c) Gypsum (d) Bauxite (e) None of these
- (42) Ozone layer prevents the following radiation from entering the atmosphere:  
 (a) Infra-red (b) Ultraviolet (c) X-rays (d) Gamma rays (e) None of these
- (43) The phenomenon of Aurora Borealis, the display of red and green lights in northern hemisphere is due to radiations from:  
 (a) Ionosphere (b) Troposphere (c) Mesosphere (d) Stratosphere (e) None of these

- (44) Yeast is used in making bread because it produces:  
 (a) Carbon dioxide (b) Sugar (c) Bacteria (d) Oxygen (e) None of these
- (45) Oasis is associated with:  
 (a) Glaciers (b) Desert (c) Islands (d) Volcanoes (e) Fertile land
- (46) Quartz crystal in quartz watches works on the principle called:  
 (a) Photoelectric effect (b) Stark effect (c) Thermionic effect  
 (d) Piezo-electric effect (e) None of these
- (47) The Fruits without seed, like banana, are called:  
 (a) seedless fruits (b) parthenogenesis fruits (c) parthenocarpic fruits (d) placental fruits  
 (e) Organic fruits
- (48) Animal which captures and readily kills living animals for its food is called:  
 (a) Parasite (b) Scavenger (c) Predator (d) Mammal (e) None of these
- (49) In a railway track, two rails are joined end to end with a gap in between them because:  
 (a) Steel can be saved.  
 (b) Accidents due to contraction in winter can be avoided.  
 (c) Air gaps are necessary for bearing the weight of running train.  
 (d) Accidents due to expansion in summer can be avoided.  
 (e) All of these
- (50) Name the famous book of Ibn-Sina in which he discussed human physiology and medicine:  
 (a) Al-Qanoon (b) Al-Masudi (c) New Renaissance (d) Tadhkira (e) None of these

**PART – II (Subjective)**

**NOTE:** (i) Attempt **ONLY FIVE** questions from **PART-II**. All questions carry **EQUAL** marks.  
 (ii) Extra attempt of any question or any part of the attempted question will not be considered.

- Q.2.** Write short note on the following by giving their exact life span and contributions to the field of science (Accurate facts will be appreciated) (5 x 2)  
 (a) Umer Al Khayam (b) Zakariya Al Razi
- Q.3.** Differentiate between **ANY FIVE** of the following pairs. (2 x 5)  
 (a) Umbra and Penumbra (b) Heavy water and hard water (c) Smog and Smoke  
 (d) Myopia and Hypropia (e) Lava and Magma (f) Periscope and perimeter  
 (g) X-rays and Gamma rays
- Q.4.** Sun is a glorious star in our sky. Write down its characteristics with reference to the following data:  
 (a) Distance from earth (b) Mean distance from centre of galaxy  
 (c) Velocity around centre of galaxy (d) Revolution period around centre of galaxy  
 (e) Equatorial diameter (f) Rotation period at the equator  
 (g) Core temperature (h) Solar wind  
 (i) The lovely Diamond Ring effect (i) Future of sun
- Q.5.** Write briefly (not more than three to four sentences) about **ANY FIVE** of the following. (2 x 5)  
 (a) Allotropy (b) Nebula (c) Enrichment of Uranium  
 (d) Aqua Regia (e) Greenhouse effect (f) Igneous rocks
- Q.6.** (a) Define **GENETIC ENGINEERING**. In how many ways Genetic Engineering can be applied in different fields of life? Does it benefit society? Discuss. (1+3+2)  
 (b) What do the following scientific abbreviations stand for? (1/2 each)  
 (i) SONAR (ii) CNS (iii) PTFE (iv) LDL (v) SARS  
 (vi) GUT (vii) BASIC (viii) BTU
- Q.7.** (a) What are **MINERALS**? Discuss **ANY TWO** physical properties thereof. Also mention the names of four precious minerals of high commercial value.  
 (b) Define the following: (1 each)  
 (i) Amphibion (ii) Synchronous satellite (iii) Big Dipper  
 (iv) Fermentation (v) Millennium Bug
- Q.8.** (a) Define **RECEPTORS** in man. Name different receptor organs in human body. Also discuss **ANY TWO** of them briefly.  
 (b) Give scientific reasons of the following. (1 each)  
 (i) The dogs pant, the birds open their mouth and the elephants move rapidly their ears.  
 (ii) The manholes covers are generally round.  
 (iii) A geostationary satellite appears standstill to a viewer on the equator of earth.  
 (iv) We never see birds urinating.  
 (v) Pasteurized milk has more nourishment than the ordinary boiled milk.
- Q.9.** (a) Highlight the similarities and differences between animals and plants. (3+3)  
 (b) Write short note on **ANY TWO** of the following. (2 each)  
 (i) Teleprinter (ii) Dengue Virus (iii) Vacuum Cleaner

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