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the metamorphosis starts from here....



**Brilliant International
Olympiad of
SCIENCE**

Class-10

(Syllabus and Sample Question Paper)

Chemical Reactions And Equations, Acid ,Bases And Salts, Periodic Classification Of Elements, Metals and Non Metals, Carbon And Its Compounds, Life Processes, Control And Coordination, How Do Organisms Reproduce, Heredity and Evolution, Light – Reflection, Refraction, Human Eye and Colorful World, Electricity & Magnetic Effects Of Current, Sources Of Energy, Our Environment & Management Of Natural Resources

The Actual Question Paper Contains 40 Questions. The Duration of the Test Paper is 60 Minutes

1. Peter burns a piece of paper with the help of reflected ray of sun by using a mirror. The type of mirror used by peter is?

- (A) A plane mirror (B) A concave mirror
(C) a convex mirror (D) bifocal lens
(E) None of these

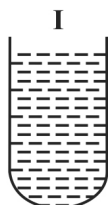
2. We know the electrical resistance of an electrical element is the oppositon to the passage of electric current through the element. The resistance of a conduction wire does not depend upon?

- (A) Area of cross section (B) length
(C) Temperature (D) Voltage applied
(E) None of these

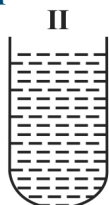
3. The filament of an electric bulb is made up of tungstan because?

- (A) It has high resistance (B) It has low resistance
(C) It has no resistance (D) It is non volatile
(E) None of these

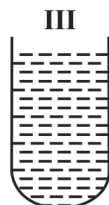
4. Four test tubes containing (I), (II), (III) and (IV) are shown below along with their colours, copper sulphate contained in?



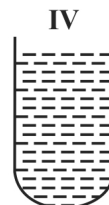
Green



Yellow



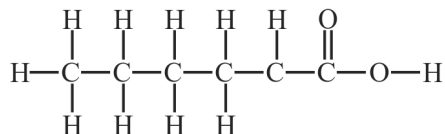
Blue



Colourless

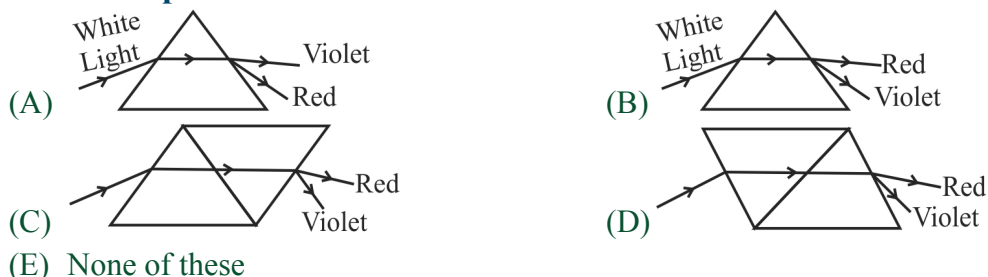
- (A) I (B) II
(C) III (D) IV
(E) None of these

5. The IUPAC name of the following structure is?

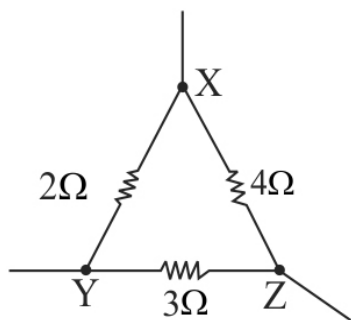


- (A) Pentanone (B) Pentane
 (C) Pentanoic acid (D) Butanoic acid
 (E) None of these

6. A ray of light is directed upon a glass prism is dispersed. Which of the following is the correct dispersion?



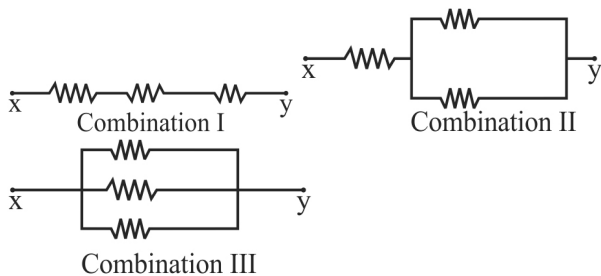
7. Three resistors are connected as shown in the figure:



Between which two points is the effective resistance greatest?

- (A) X and Y (B) X and Z
 (C) Y and Z (D) Same for any two terminals
 (E) None of these

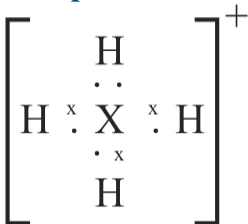
8. Figure below shows three combinations of resistors as connected between points X and Y. All the resistors have resistance 4Ω :



The ratio of total resistance between the points X and Y of each combination I, II and III respectively, is?

- (A) 1:1:1 (B) 3:2:1 (C) 1:9:3 (D) 18:9:2
 (E) None of these

-
9. The ion XH_4^+ can be represented by the dot and cross diagrams shown. To which group in the periodic table does X belong?



- (A) Group I (B) Group II
(C) Group 14 (D) Group 15
(E) None of these
-

10. Read the statements given below:

I: All elements in the periodic table contains minimum of 8 elements except 1st period.

II: A 'K shell' can accommodate maximum of two electrons

- (A) Statement I and II are true and II is correct explanation of I
(B) Statement I is true but II is not a correct explanation of I
(C) Statement I is true but II is false
(D) Statement I is false but II is true
(E) None of these
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11. Chemical formula of bleaching powder is?

- (A) CaOCl (B) CaOCl_2
(C) Ca(OH)_2 (D) CaCO_3
(E) None of these
-

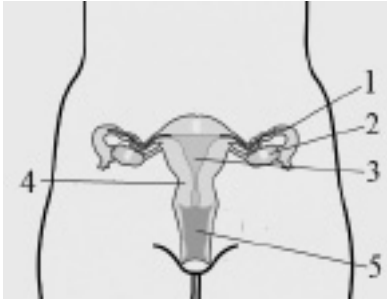
12. Which of the following diseases is caused due to the deficiency of thyroxine hormone?

- (A) Goitre (B) Beriberi
(C) Plasgera (D) Decreased body growth
(E) None of these
-

13. Choose the odd one:

- (A) Phototropism (B) Lightotropism
(C) Hydrotropism (D) Chemotropism
(E) None of these

14. Choose the correct one:



- (A) (a) Fallopian tubes (b) ovaries
(c) Uterus (d) Cervix
(e) Vagina
- (B) (a) Fallopian tubes (b) Ovaries
(c) Uterus (d) Vagina
(e) Cervix
- (C) (a) Uterus (b) Fallopian tubes
(c) Ovaries (d) Cervix
(e) Ovaries
- (D) (a) Ovaries (b) Cervix
(c) Vagina (d) Fallopian tubes
(e) Uterus
- (E) None of these

15. An object is placed at _____ distance from a convex lens of the focal length 10 cm to produce a diminished real image.

- (A) 8 cm (B) 10 cm
(C) 20 cm (D) 25 cm
(E) None of these

ANSWERS

1. B 2. D 3. A 4. C 5. C
6. B 7. B 8. D 9. D 10. A
11. B 12. A 13. B 14. A 15. D