KINETICS
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IIT-JEE | Medical | Foundations

Triangles

Question 1.
$\triangle ABC = \triangle PQR$, then which of the following is true?
(a) CB = QP
(b) CA = RP
(c) AC = RQ
(d) AB = RP

Answer: (b) CA = RP

Question 2.
In $\triangle ABC$ and $\triangle DEF$, AB = DE and $\angle A = \angle D$.Then two triangles will be congruent by SA axiom if:
(a) BC = EF
(b) AC = EF
(c) AC = DE
(d) BC = DE

Answer: (c) AC = DE

Question 3.
In a right triangle, the longest side is:
(a) Perpendicular
(b) Hypotenuse
(c) Base
(d) None of the above

Answer: (b) Hypotenuse

Question 4.
In $\triangle ABC$, if $\angle A = 45°$ and $\angle B = 70°$, then the shortest and the longest sides of the triangle are

respectively,
(a) BC,AB
(a) AB,AC
(c) AB,BC
(d) BC,AC

Answer: (d) BC,AC

Question 5.
If the altitudes from vertices of a triangle to the opposite sides are equal, then the triangles is
(a) Scalene
(b) Isosceles
(c) Equilateral
(d) Right-angled

Answer: (b) Isosceles

Question 6.
D is a Point on the Side BC of a $\triangle ABC$ such that AD bisects $\angle BAC$ then:
(a) BD = CD
(b) CD > CA
(c) BD > BA
(d) BA > BD

Answer: (d) BA > BD

Question 7.
If $\Delta ABC \cong \Delta PQR$ then which of the following is true:
(a) CA = RP
(b) AB = RP
(c) AC = RQ
(d) CB = QP

Answer: (a) CA = RP

Question 8.
If two triangles ABC and PQR are congruent under the correspondence A ↔ P, B ↔ Q, and C ↔ R, then symbolically, it is expressed as
(a) $\Delta ABC \cong \Delta PQR$
(b) $\Delta ABC = \Delta PQR$

(c) ΔABC and ΔPQR are scalene triangles
(d) ΔABC and ΔPQR are isosceles triangles

Answer: (a) ΔABC ≅ ΔPQR

Question 9.
If the bisector of the angle A of an ∆ABC is perpendicular to the base BC of the triangle then the triangle ABC is :
(a) Obtuse Angled
(b) Isosceles
(c) Scalene
(d) Equilateral

Answer: (b) Isosceles

Question 10.
If AB = QR, BC=RP and CA = QP, then which of the following holds?
(a) ∆BCA ≅ ∆PQR
(b) ∆ABC ≅ ∆PQR
(c) ∆CBA ≅ ∆PQR
(d) ∆CAB ≅ ∆PQR

Answer: (d) ∆CAB ≅ ∆PQR

Question 11.
ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB respectively. Then:
(a) BE > CF
(b) BE < CF
(c) BE = CF
(d) None of the above

Answer: (c) BE = CF

Question 12.
Which of the following is not a criterion for congruence of triangles?
(a) SSS
(b) SSA

(c) ASA
(d) SAS

Answer: (b) SSA

Question 13.
In $\triangle ABC$, if $\angle B = 30°$ and $\angle C = 70°$, then which of the following is the longest side?
(a) AB
(b) BC
(c) AC
(d) AB or AC

Answer: (b) BC

Question 14.
The angles opposite to equal sides of a triangle are:
(a) Equal
(b) Unequal
(c) supplementary angles
(d) Complementary angles

Answer: (a) Equal

Question 15.
If ABC is an equilateral triangle, then each angle equals to:
(a) 90°
(b)180°
(c) 120°
(d) 60°

Answer: (d) 60°

Question 16.
$ABC \cong \triangle PQR$. If AB=5 cm, and then which of the following is true?
(a) QR = 5 CM, $\angle R = 60°$
(b) QP = 5 cm, $\angle P = 60°$
(c) QP = 5cm, $\angle R = 60°$
(d) QR = 5 CM, $\angle Q = 60°$

Answer: (b) QP = 5 cm, $\angle P = 60°$

Question 17.
O is any point in the interior of $\triangle ABC$.Then which of the following is true?
(a) $(OA+OB+OC) < \frac{1}{2}\ (AB+BC+CA)$
(b) $(OA+OB+OC) > (AB+BC+CA)$
(c) $(OA+OB+OC) > \frac{1}{2}\ (AB+BC+CA)$
(d) None of the Above

Answer: (c) $(OA+OB+OC) > \frac{1}{2}\ (AB+BC+CA)$

Question 18.
It is not possible to construct a triangle when its sides are:
(a) 6 cm, 7 cm, 7 cm
(b) 5.4 cm, 2.3 cm, 3 cm
(c) 8.3 cm, 3.4 cm, 6.1 cm
(d) 3 cm, 5 cm, 5 cm

Answer: (b) 5.4 cm, 2.3 cm, 3 cm

Question 19.
Two equilateral triangles are congruent when:
(a) Their areas are proportional
(b) Their sides are equal
(c) Their sides are proportional
(d) Their angles are equal

Answer: (b) Their sides are equal

Question 20.
It is not possible to construct a triangle when the lengths of its sides are
(a) 4 cm, 6 cm, 6 cm
(b) 9.3 cm, 5.2 cm, 7.4 cm
(c) 6 cm, 7 cm, 8 cm
(d) 5.3 cm, 2.2 cm, 3.1 cm

Answer: (d) 5.3 cm, 2.2 cm, 3.1 cm

Question 21.
Which of the following statements is incorrect?
(a) Two squares having the same side length are congruent
(b) Two rectangles having the same area are congruent
(c) Two circles having the same radius are congruent
(d) Two lines having same length are congruent

Answer: (b) Two rectangles having the same area are congruent

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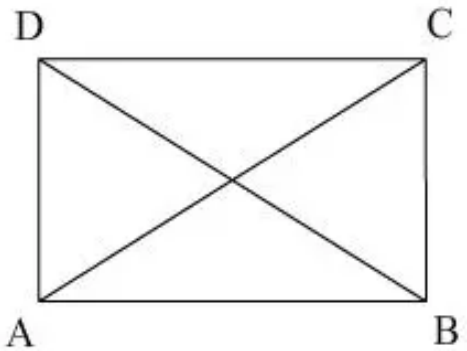
Question 22.
ABCD is a parallelogram, if the two diagonals are equal, then by what criterion are the triangles ABD and ABC congruent



(a) AAS
(b) SSS
(c) SAS
(d) RHS

Answer: (b) SSS
