INTEGRATED

class: VII, MATHEMATICS

5. UNDERSTANDING 2D AND 3D SHAPES

TEACHING TASK (JEE MAINS)

01. ~~Cone~~ length, breadth and height — Ans: C

02 Conceptual — Ans: C

03 conceptual — Ans: B

04. conceptual — Ans: B

05 Square — Ans: C

06 cuboid — Ans: A

07 Sphere — Ans: C

08 Sphere — Ans: A

09. Edge — Ans: B

10. cuboid — Ans: B

11. Cube, ~~Cone~~ cone, Hexagonal prism — Ans: A, B, C

12

		No. edges	No. of faces
	cube	12	6
Trigular	prism	9	5
Square Pyramid		8	5
Triangular Pyramid		6	4

Ans: A, B, C, D

13. Statement I:

Total length $= 12 \times 3 = 36$ cm (True)

Statement II: T.S.A $= 6a^2 = 6(3)^2 = 54$ cm^2 (True)

Ans. A

14. Statement I:

4 l's, 4 b's, 4 h's

Total lengths of the edges $= 4(l + b + h)$

$= 4(6 + 4 + 2)$

$= 48$ cm (True)

Statement II: Cuboid:

No. of edges $= 12$, No. of faces $= 6$ (True)

Ans: A

15. Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans. A

16. Assertion: No. of faces.

Hemisphere $= 2$; cube $= 6$ (True)

Reason: Conceptual (True)

Ans. A

17. 1

Ans: B

18. 1

Ans: B

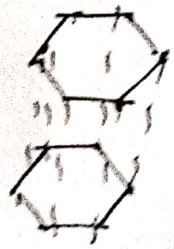
19. 4

Ans: A

20. 12

Ans: C

21.



No. of vertices $= 6 \times 2 = 12$

Ans: 12

22. 4 Ans: 4

23 a) cone → No. of bases → 1 (q)
b) cylinder → 2 (p)
c) prism → 2 (s)
d) sphere → 0 (r)
Ans: q, p, s, r

24 a) cube → face diagonal → 6x2 = 12 (r)
b) Trigular prism → 3x2 = 6 (s)
c) sphere → 0 (p)
d) Rectangular Pyramid → 2 (q) Ans: r, s, p, q

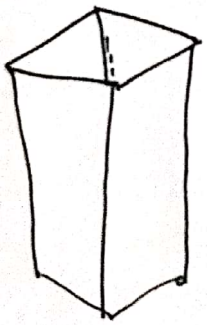
LEARNER TASK (CUE'S)

01. Cuboid (c) cylinder Ans: C

02 Conceptual Ans: C

03. Conceptual Ans: A

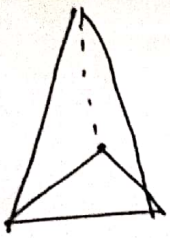
04. Rectangles & Circles Ans: C

05 
No. Triangular face 3
Ans: A

06 Conceptual Ans: A

07. Cuboid Ans: B

08 Cone Ans: A

09  → 4 triangles

Ans: B

10. Sphere

Ans: C

JEE MAINS LEVEL

01. 3

Ans: B

02 Conceptual

Ans. A

03 6 Squares

Ans. A

04. Rectangles

Ans. B

05 1

Ans: A

06 4

Ans. B

07 Trigular prism → 3 rectangles + 2 triagles

Ans: A

08 Rectangles

Ans. D

09. Cone

Ans: C

10. 1, 1, 1

Ans. A

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Ans. D

11 Cylinder,

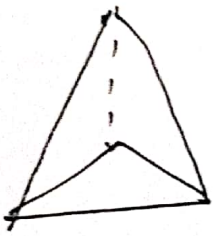
Ans. A, B

12 cube, cuboid

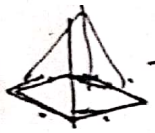
13 Statement I: Conceptual (True)
Statement II: Conceptual (True)

Ans. A

14. Statement I:



→ 4 triangular faces + 6 edges.



→ Two triagular Pyramids are combined

→ Total No. edges = ~~8~~ 9 (False)

Statement II: Total No. of faces = 6 (True)

Ans: D

15 Assertion: cuboid.

No. of Vertices = 8, No. of edges = 12 (False)

Reason: Conceptual (True) Ans. D

16 Assertion: Conceptual (True)

Reason: Conceptual (True) Ans. A

17 5 Ans: C

18 6 Ans: C

19. 7 Ans: C

20 5 Ans: A

21. 3 Ans: 3

22 12 Ans: 12

23 a) 4 (q)
b) 5 (r)
c) 5 (r)
d) 6 (s)

Ans: q, r, r, s

24) a) Square (s)
b) Circular + Curved (p)
c) only curved (q)
d) Rectangular (r)

⇒ THE END. Ans: s, p, q, r