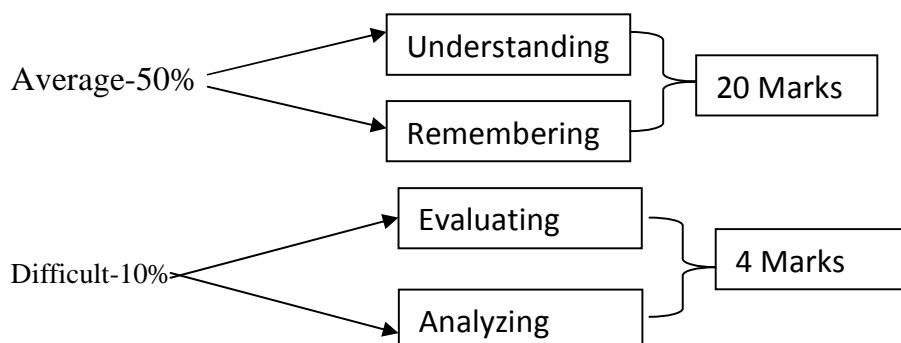


ANNEXURE-A**DAV PUBLIC SCHOOLS, ODISHAZONE****EXAM: PT-II(2023-24), SUBJECT: MATHEMATICS, CLASS: VII****BLUE PRINT OF QUESTION PAPER**

SI No	Unit	MCQ'S (5 Nos)	FIB & VSA (5 Nos)	SA-I: 2M (3 Nos.)	SA-II: 3M (4 Nos.)	LA :4M (3 Nos.)	TOTAL (20 Nos.)
1	EXPONENTS AND POWERS	2(1)	1+1=2(1)	1(2)	1(3)	1(4)	13
2	ALGEBRAIC EXPRESSIONS	1(1)	0	1(2)	1(3)	1(4)	10
3	CONGRUENT TRIANGLES	2(1)	3(1)	1(2)	2(3)	1(4)	17
TOTAL		5(1)	5(1)	3(2)	4(3)	3(4)	40

Difficulty Level

Good-40% - Application → 16 Marks



ANNEXURE -B**DAV PUBLIC SCHOOLS, ODISHA ZONE****EXAM-PT-II(2023-24), SUB – MATHEMATICS, CLASS: VII****QUESTIONWISE ANALYSIS**

Sl No	Chapters / Units	(R), (U), (A), (H), (E)
1	EXPONENTS AND POWERS	R
2	EXPONENTS AND POWERS	R
3	ALGEBRAIC EXPRESSIONS	U
4	CONGRUENT TRIANGLES	U
5	CONGRUENT TRIANGLES	R
6	EXPONENTS AND POWERS	H
7	CONGRUENT TRIANGLES	U
8	CONGRUENT TRIANGLES	U
9	EXPONENTS AND POWERS	U
10	CONGRUENT TRIANGLES	H
11	EXPONENTS AND POWERS	A
12	ALGEBRAIC EXPRESSIONS	A
13	CONGRUENT TRIANGLES	H
14	EXPONENTS AND POWERS	A
15	ALGEBRAIC EXPRESSIONS	U
16	CONGRUENT TRIANGLES	U
17	CONGRUENT TRIANGLES	A
18	EXPONENTS AND POWERS	R
19	ALGEBRAIC EXPRESSIONS	E
20	CONGRUENT TRIANGLES	U



DAV PUBLIC SCHOOLS, ODISHA ZONE

EXAM:PT-II (2023-24), CLASS : VII, SUB : MATHEMATICS

MARKING SCHEME

QN NO .	Value Points (Any other alternative solution can be awarded)	Marks Allotted	PAGE NO. OF NCERT /TEXT BOOK
	Q.No.1 to 10 carries 1mark each		
1	d) 4.7×10^{-5}	1	TB -84
2	a) 2	1	TB-89
3	b) 9	1	TB-125
4	c) $\angle B = \angle R$	1	TB-187
5	a) $\angle DEF$	1	TB-188
6	- 4	1	TB-75
7	75^0	1	TB-177
8	Same radius	1	TB-170
9	3	1	TB-80
10	AC = PR	1	TB-186
11	$2^3 + 3^2 + 4^1$ $= 8 + 9 + 4$ $= 21$	$\frac{1}{2}$ 1 $\frac{1}{2}$	TB-80
12	$2pq (3p^2 + 4q) - q^2 (3p^2 + 4q)$ $= 6 p^3 q + 8pq^2 - 3 p^2 q^2 - 4q^3$ $= 6 p^3 q - 3 p^2 q^2 + 8pq^2 - 4q^3$	1 1	TB-116
13	(i) yes (ii)PS = RS (given)	$\frac{1}{2}$	TB-171

	<p>PQ = RQ (given)</p> <p>QS = QS (common side)</p>	1½	
14	$a = \left(\frac{3}{2}\right)^{-2} \div \left(\frac{7}{5}\right)^0 = \left(\frac{2}{3}\right)^2 \div 1$ $a = \left(\frac{2}{3}\right)^2$ $a^3 = \left[\left(\frac{2}{3}\right)^2\right]^3 = \left(\frac{2}{3}\right)^6$ $a^3 = \frac{2 \times 2 \times 2 \times 2 \times 2 \times 2}{3 \times 3 \times 3 \times 3 \times 3 \times 3} = \frac{64}{729}$	<p>½</p> <p>½</p> <p>1</p> <p>1</p>	TB-81
15	$2 \times \frac{3}{4} \times x^2 \times x \times y \times y^2$ $= \frac{3}{2} x^3 y^3$ $= \frac{3}{2} \times 1^3 \times (-1)^3$ $= -\frac{3}{2}$	<p>1</p> <p>½</p> <p>½</p> <p>1</p>	TB-126
16	<p>In $\triangle ABE$ and $\triangle ACD$</p> <p>AB = AC (given)</p> <p>BD = EC (given)</p> <p>$\angle B = \angle C$ (Opposite angles of equal sides)</p> <p>BD + DE = EC + DE</p> <p>$\Rightarrow BE = CD$</p> <p>$\triangle ABE \cong \triangle ACD$ (by SAS congruence condition)</p>	<p>½</p> <p>½</p> <p>1</p> <p>½</p> <p>½</p>	TB-191
17	<p>In $\triangle ABD$ and $\triangle ACD$</p> <p>AB = AC (given)</p> <p>BD = CD (given)</p> <p>AD = AD (common side)</p> <p>Hence, $\triangle ABD \cong \triangle ACD$ by SSS congruence condition.</p> <p>Then $\angle BAD = \angle CAD$ and $\angle ADB = \angle ADC$ (By CPCT)</p> <p>Hence AD bisects $\angle A$ and $\angle D$.</p>	<p>1½</p> <p>1½</p>	TB-190
18	<p>(i) $(1.6 \times 10^9) \times (5.0 \times 10^{-3})$</p> $= (1.6 \times 5) \times (10^9 \times 10^{-3})$ $= 8 \times 10^6$ <p>(ii) $[4^2 - 3^2] \div \left(\frac{1}{7}\right)^2$</p>	<p>2</p> <p>2</p>	<p>TB-86</p> <p>TB-72</p>

	$= (16 - 9) \div \frac{1}{49}$ $= 7 \times 49 = 343.$		
19	$a(a^2 + ab + b^2) - b(a^2 + ab + b^2)$ $= a^3 + a^2b + ab^2 - a^2b - ab^2 - b^3$ $= a^3 - b^3$ <p>L.H.S = $(a - b)(a^2 + ab + b^2)$</p> $= [2 - (-3)][2^2 + 2 \times (-3) + (-3)^2]$ $= (2 + 3)(4 - 6 + 9)$ $= 5 \times 7$ $= 35$ <p>R.H.S = $a^3 - b^3$</p> $= 2^3 - (-3)^3$ $= 8 - (-27)$ $= 35$ <p>\therefore LHS = RHS (verified)</p>	<p>2</p> <p>1</p> <p>1</p>	TB-118
20	<p>(i) Yes</p> <p>(ii) by SSS congruence condition</p> <p>(iii) PS = SP (common side) PQ = SR (given) QS = RP (given)</p> <p>(iv) $\angle SRP = \angle SQP = 40^\circ$ (by CPCT) $\angle QPS = 110^\circ$ (given) $\angle PSQ = 180^\circ - (\angle SQP + \angle QPS)$ $= 180^\circ - (40^\circ + 110^\circ)$ $= 180^\circ - 150^\circ$ $= 30^\circ$</p>	<p>$\frac{1}{2}$</p> <p>$\frac{1}{2}$</p> <p>1</p> <p>1</p> <p>1</p>	TB-190