

P. R. GOVERNMENT COLLEGE (A), KAKINADA
II B.Sc. /B.A. /B.Com. - Semester IV (w.e.f 2017-2018)
Course: ANALYTICAL SKILLS

Total Hrs. of Teaching-Learning: 30@ 2 hr/Week

Total credits: 02

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Objectives:

- To impart the knowledge of arithmetic and reasoning.
 - To built up confidence for writing competitive examinations
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UNIT – 1: Data Analysis (6 Hrs)

The data given in a Table – Graph - Bar Diagram - Pie Chart - Venn diagram or a Passage is to be analyzed and the questions pertaining to the data are to be answered.

UNIT – 2: Sequence and Series (6 Hrs)

Analogies of numbers and Alphabets - Completion of blank spaces following the pattern in A:b::C: d relationship - Odd thing out - Missing number in a sequence or a series.

UNIT – 3: Arithmetic Ability (6 Hrs)

Algebraic Operations - BODMAS – Fractions - Divisibility Rules – LCM & GCD (HCF) - Date, Time and Arrangement Problems, Calendar problems, Clock problems, Blood Relationship.

UNIT – 4: Quantitative Aptitude (6 Hrs)

Averages - Ration and Proportion - Problems on Ages – Time - Distance – Speed.

UNIT – 5: Business Computations (6 Hrs)

Percentages - Profit and Loss - Partnership - Simple and Compound Interest.

Reference Books:

1. Quantitative Aptitude for Competitive Examination by R S Agrawal, S.Chand publications

BLUE PRINT FOR QUESTION PAPER PATTERN
SEMESTER-IV
ANALYTICAL SKILLS

UNIT	TOPIC	V.S.A.Q Multiple choice (1 Mark)	S.A.Q (3 Marks)	E.Q (5 Marks)	
1	Data Analysis	-	-	2	10
2	Sequence and Series	10	-	-	10
3	Arithmetic ability	-	3	2	19
4	Quantitative aptitude	-	2	2	16
5	Business computations	-	3	2	19
	TOTAL MARKS				74

V.S.A.Q = Very short answer questions (1 mark)

S.A.Q = Short answer questions (3 marks)

E.Q = Essay questions (5 marks)

Very short answer questions : 10 X 1 = 10

Short answer questions : 05 X 3 = 15

Essay questions : 05 X 5 = 25

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Total Marks = 50

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P.R. Government College (A), Kakinada
II B.Sc./BA/B.Com. Degree Examination – Semester : IV
ANALYTICAL SKILLS
Model Paper (w.e.f. 2017-2018)

Time: 2 Hrs

Total Marks: 50M

SECTION- A

Answer all questions.

10 x 1 = 10M

అన్నీ ప్రశ్నలకు సమాధానములు వ్రాయండి.

1. Missing number in the series is _____. ()
ఈ క్రింది శ్రేణిలో ? వున్న చోట వుండే సంఖ్య _____.
1, 9, 25, 49, ?, 121
a) 64 b) 81 c) 91 d) 100
2. Missing number in the series is _____. ()
ఈ క్రింది శ్రేణిలో ? వున్న చోట సంఖ్య _____.
4, 10, 18, 28, 40, 54, 70, ?
a) 85 b) 86 c) 87 d) 88
3. The wrong number in the following series is _____. ()
ఈ క్రింది శ్రేణిలో తప్పుగా ఇవ్వబడిన సంఖ్య _____.
8, 13, 21, 32, 47, 63, 83
a) 13 b) 21 c) 32 d) 47
4. Missing alphabet in the following series is _____. ()
ఈ క్రింది శ్రేణిలో ?, ? వున్న చోట వుండే అక్షరాలు _____.
T, R, P, N, L, ?, ?
a) F b) J, H c) K, H d) K, L
5. Missing Alphabet in the following series is _____. ()
ఈ క్రింది శ్రేణిలో ? వున్న చోట వుండే అక్షరాలు _____.
AB, DEF, HIJK, ?, STUVWX
a) LMNO b) LMNOP c) MNOPQ d) QRSTU
6. Missing term in the following series is _____. ()
ఈ క్రింది శ్రేణిలో తదుపరి చివరి పదాలు _____.
D - 4, F - 6, H - 8, J - 10, ?, ?
a) K - 12, M - 13 b) L - 12, M - 14 c) L - 12, N - 14 d) K - 12, M - 14
7. Fill the missing letters in the following series. ()
ఈ క్రింది అక్షర శ్రేణిలో ఖాళీలను పూరింపుము.
_ _ aba _ _ ba _ ab
a) abbbba b) abbab c) baab d) bbaba
8. Find relationship between the words ()

పద సారూప్యతను అనుసరించి ఈ క్రింది ప్రశ్నలో ? ఉన్న చోట ఉండే పదం

Botany : Plants : : Entomology : ?

- a) Snakes b) nsects c) Birds d) Germs

9. Find relationship between the words ()

పద సారూప్యతను అనుసరించి ఈ క్రింది ప్రశ్నలో ? ఉన్న చోట ఉండే పదం

Needle : Thread :: Pen : ?

- a) Ink b) Cap c) Paper d) Word

10. Find relation ship between the numbers is ()

సంఖ్య సారూప్యతను అనుసరించి ఈ క్రింది ప్రశ్నలో ? ఉన్న చోట ఉండే పదం

18 : 30 :: 36 : ?

- a) 54 b)62 c)64 d)66

SECTION - B

Answer any FIVE of the following questions.

5 x 3 = 15 M

ఏవేని క్రింది ఐదు ప్రశ్నలకు సమాధానములు వ్రాయండి.

11. Find the value of $\frac{(6+6+6+6) \div 6}{4+4+4+4 \div 4}$.
 $\frac{(6+6+6+6) \div 6}{4+4+4+4 \div 4}$ విలువను కనుగొనుము.

12. If the number 517 * 324 is completely divisible by 3, then the smallest whole number in Place of * will be.

517 * 324 అనే సంఖ్య 3 చేత నిశ్శేషంగా భాగింపబడితే, * స్థానంలో ఇమిడే కనిష్ట పూర్ణాంక సంఖ్యను కనుగొనుము.

13. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D ?

B సోదరి A. B తల్లి C. C తండ్రి D. D తల్లి E అయితే, D తో A కు గల సంబంధం ?

13. If A : B = 2 : 3 and B : C = 4 : 7, then find A : B : C = ?

A : B = 2 : 3 మరియు B : C = 4 : 7, అయితే A : B : C ను కనుగొనుము.

15. The average of four consecutive even numbers is 27. Then, find the largest of these Numbers.

నాలుగు వరుస సరి సంఖ్యల సగటు 27. అయితే, వాటిలో గరిష్ట సంఖ్యను కనుగొనుము.

16. What is 25% of 25% equal to ?

25% యొక్క 25% దేనికి సమానం.

17. A man buys a cycle for Rs.1400 and sells it at a loss of 15%. What is the selling price of the cycle?

ఒక వ్యక్తి ఒక సైకిల్ ను రూ. 1400 కొని, 15% నష్టంతో అమ్మెను. అమ్మిన ధర ఎంత?

18. Find the simple interest on Rs 7500 in 4 years at 15%.

4 సంవత్సరాలలో 15% వడ్డీ రేటుతో 7500/- పై వచ్చే సాధారణ వడ్డీని కనుగొనుము.

SECTION - C

Answer any FIVE of the following questions.

5 x 5 = 25 M

ఏవేని క్రింది ఐదు ప్రశ్నలకు సమాధానములు వ్రాయండి.

19. DIRECTIONS: Study the table carefully to answer the questions that follow.

సూచనలు: క్రింది పట్టికను చదివి, ఆ దిగువన ఇవ్వబడిన ప్రశ్నలకు సమాధానములు వ్రాయండి.

Maximum and minimum Temperature (in degree Celsius) recorded on first day of each month for five different cities.

5 భిన్న పట్టణాలలో ప్రతి నెల 1 వ తారీఖున నమోదైన గరిష్ట మరియు కనిష్ట ఉష్ణోగ్రతలు

(సెల్సియస్ లలో)

Month / నెల	Temperature / ఉష్ణోగ్రత									
	Bhuj		Sydney		Ontario		Kabul		Beijing	
	Max /గరిష్ట	Min /కనిష్ట	Max /గరిష్ట	Min /కనిష్ట	Max /గరిష్ట	Min /కనిష్ట	Max /గరిష్ట	Min /కనిష్ట	Max /గరిష్ట	Min /కనిష్ట
1 st Sep	24	14	12	2	5	1	34	23	12	9
1 st Oct	35	21	5	-1	15	6	37	30	9	3
1 st Nov	19	8	11	3	4	0	45	36	15	1
1 st Dec	9	2	-5	-9	-11	-7	31	23	2	-3
1 st Jan	-4	-7	-11	-13	-14	-19	20	11	5	-13

1. What is the difference between the max temperature of Ontario on 1st Nov and the min temperature of Bhuj on 1st Jan?

Ontario లో 1st Nov లో నమోదైన గరిష్ట ఉష్ణోగ్రతకు మరియు Bhuj లో 1st Jan లో కనిష్ట ఉష్ణోగ్రతకు గల వ్యత్యాసం

(1) 3 °C (2) 18 °C (3) 15 °C (4) 9 °C (5) 11 °C

2. In which month respectively the max temperature of Kabul is 2nd highest and min temperature of Sydney is highest ?

Kabul రెండవ గరిష్ట ఉష్ణోగ్రత మరియు Sydney మొదటి కనిష్ట ఉష్ణోగ్రత వరుసగా ఏ ఏ నెలలలో నమోదైనాయి.

- (1) 1st oct & 1st jan (2) 1st oct & 1st nov (3) 1st dec & 1st jan (4) 1st sept & 1st jan
 (5) 1st dec & 1st Sept

3. In which month on 1st day is the difference between the max temperature & min temperature of Bhuj second highest

Bhuj గరిష్ఠ మరియు కనిష్ఠ ఉష్ణోగ్రతలో భేదం ఏ నెల మొదటి భేదం తారీఖున రెండవ అత్యుత్తముగా ఉన్నాయి.

- (1) 1st sept (2) 1st oct (3) 1st no (4) 1st dec (5) 1st jan

4. What is the average maximum temperature of Beijing over all the months together

అన్నీ నెలల మీద Beijing గరిష్ఠ ఉష్ణోగ్రత సగటు ఎంత

- (1) 8.4°C (2) 9.6°C (3) 7.6°C (4) 9.2°C (5) 8.6°C

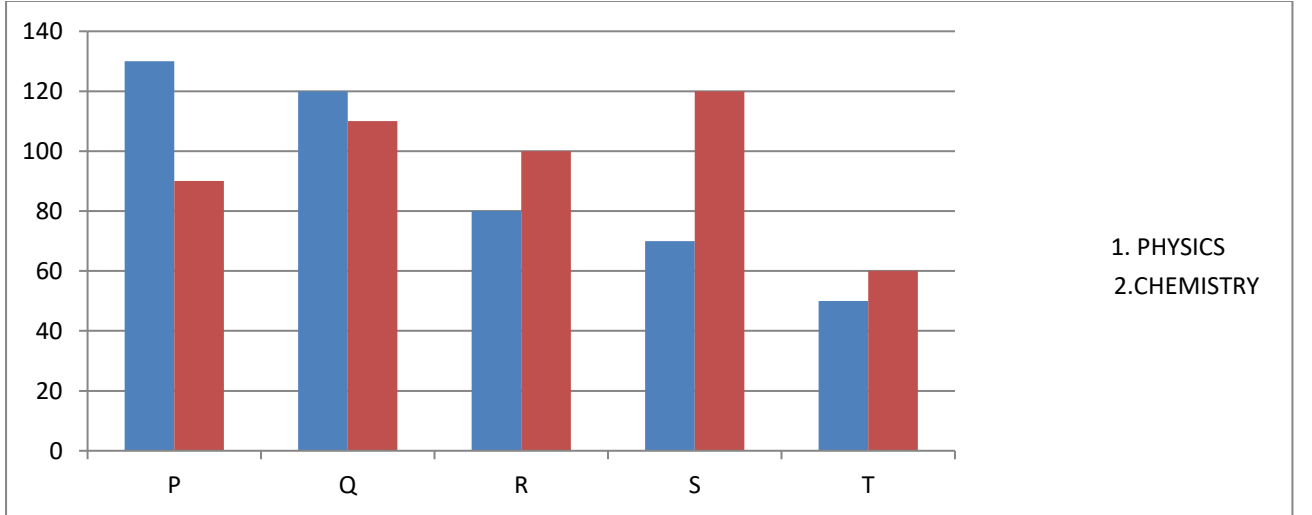
5. What is the respective ratio between the min temperature of Beijing on 1st sep & the max temperature of Ontario on 1st oct ?

1st sep లో Beijing కనిష్ఠ ఉష్ణోగ్రత కు, 1st oct లో Ontario గరిష్ఠ ఉష్ణోగ్రత కు మధ్య నిష్పత్తి ఎంత ?

- (1) 3:4 (2) 3:5 (3) 4:5 (4) 1:5 (5) 1:4

20. Study the following bar graphs carefully to answer these questions. Marks obtained by 5 students in physics & chemistry.

ఈ క్రింది బార్ చిత్రల్ని జాగ్రత్తగా చదివి, ఆ దిగువన ఉన్న ప్రశ్నలకు సమాధానములిమ్ము. **Physics & Chemistry** లో 5 గురు విద్యార్థులకు వచ్చిన మార్కులు.



1. Marks obtained by S in chemistry is what percent of the total marks obtained by all the students in chemistry ?

Chemistry లో అందరి విద్యార్థులకు వచ్చిన మొత్తం మార్కులలో, Chemistry లో S కు వచ్చిన మార్కుల శాతం ఎంత ?

(1)25

(2)28.5

(3)35

(4)31.5

(5)22

2. If the marks obtained by T in physics were increased by 14% of the original marks, what would be his new approximate % in physics if the max marks in physics were 140?

Physics లో T కు వచ్చిన అసలు మార్కులకు 14% కు పెంచిన మరియు Physics లో మొత్తం మార్కులు 140 అయిన, Physics లో T యొక్క కొత్త శాతం (అటుఇటుగా) ఎంత ?

(1)57

(2)32

(3)38

(4)48

(5)41

3. Fill in the blank space in order to make the sentence correct as per the given information. Total marks obtained by T in both the subjects together is more than the marks obtained by_____.

ఇచ్చిన సమాచారం ప్రతిగా, ఈ క్రింది వాక్యమును సరియైన ఖళితో పూరింపుము. T కు రెండు సబ్జెక్టులలో కలిపి వచ్చిన మార్కుల కంటే _____ మార్కులు ఎక్కువ.

- (1) Q in chemistry (2) R in physics (3) S in chemistry (4) P in physics (5) R in both the subjects together

4. What is the respective ratio between the total marks obtained by P in physics & chemistry together to the total marks obtained by T in physics & chemistry together ?

P కు physics మరియు chemistry లో వచ్చిన మార్కుల మొత్తానికి మరియు T కు physics మరియు chemistry లో వచ్చిన మార్కుల మొత్తానికి మధ్య నిష్పత్తి

(1) 3:2

(2) 4:3

(3) 5:3

(4) 2:1

(5)None of these

5. What is the respective ratio between the total marks obtained by Q & S together in chemistry to the total marks obtained by P & R together in physics?

Q మరియు S కు chemistry లో వచ్చిన మార్కుల మొత్తానికి మరియు P మరియు R కు physics లో వచ్చిన మార్కుల మొత్తానికి మధ్య నిష్పత్తి ?

(1)23:25

(2)23:21

(3)17:19

(4)17:23

(5) none of these

21. The H.C.F. of two numbers is 11 and their L.C.M. is 693. If one of the numbers is 77, then find the other.

రెండు సంఖ్యల గ.సా.భా. 11 మరియు క.సా.గు. 693. ఒక సంఖ్య 77 అయితే, రెండవ సంఖ్యను కనుగొనుము.

22. A clock is set right at 8 A.M. The clock gains 10 minutes in 24 hours will be the true time when the clock indicates 1 P.M. on the following day?

ఒక గడియారం 8 A.M. కు సరిచేయబడింది. అది 24 గంటలలో 10 నిమిషాలు ఎక్కువగా చూపించును. అయితే మరుసటి రోజు గడియారం 1 P.M. చూపించినప్పుడు ఖచ్చిత సమయం ఎంత?

23. If $\frac{1}{5} : \frac{1}{x} :: \frac{1}{x} : \frac{1}{125}$, then the value of x is ?

$\frac{1}{5} : \frac{1}{x} :: \frac{1}{x} : \frac{1}{125}$, అయిన x విలువ ఎంత ?

24. How many minutes does Aditya take to cover a distance of 400 m, if he runs at a speed of 20 km/ hr ?

ఆదిత్య km/ hr వేగంతో పరుగెత్తిన, 400 m దూరం ప్రయాణించుటకు ఎన్ని నిమిషములు తీసుకొనెను?

25. Sanjay and Raju started a business and invested Rs. 20000 and Rs. 25000 respectively. After 4 months Raju left and Naresh joined by investing Rs.15000. At the end of the year there was a profit of Rs. 4600. what is the share of Naresh ?

Sanjay మరియు Raju వరుసగా Rs. 20000 మరియు Rs. 25000 పెట్టుబడితో ఒక వ్యాపారం ప్రారంభించెను. 4 నెలల తర్వాత Raju వ్యాపారం నుండి తప్పుకొనెను మరియు Naresh Rs. 15000 లతో వ్యాపారం లో చేరెను. సంవత్సరం చివరన Rs. 4600 లాభం వచ్చిన, అందులో Naresh వాట ఎంత ?

26. Meena purchased two fans each at Rs.1200. She sold one fan at the loss of 5% and other at the gain 10%. Find the total gain or loss percent ?

ఒక్కొక్కటి Rs. 1200 చొప్పున Meena రెండు fan లు కొనెను. ఒక fan ను 5% నష్టం తో, 2 వ దాన్ని 10% లాభంతో అమ్మెను. అయిన లాభం లేక నష్ట శాతం ఎంత?

P. R. GOVERNMENT COLLEGE (A), KAKINADA
DEPARTMENT OF MATHEMATICS AND STATISTICS
QUESTION BANK FOR ANALYTICAL SKILLS

UNIT-1 DATA ANALYSIS

1. DIRECTIONS: Study the table carefully to answer the questions that follow: Maximum and minimum Temperature (in degree Celsius) recorded on first day of each month for five different cities.

Month	Temperature									
	Bhuj		Sydney		Ontario		Kabul		Beijing	
	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
1 st sep	24	14	12	2	5	1	34	23	12	9
1 st oct	35	21	5	-1	15	6	37	30	9	3
1 st nov	19	8	11	3	4	0	45	36	15	1
1 st dec	9	2	-5	-9	-11	-7	31	23	2	-3

1 st jan	-4	-7	-11	-13	-14	-19	20	11	5	-13
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1. What is the difference between the max temperature of Ontario on 1stnov and the min temperature of Bhuj on 1stjan?

- (1) 3 °C (2) 18 °C (3) 15 °C (4) 9 °C **(5) 11 °C**

ANS: (5) Required difference = 4 - (-7) = 4 + 7 = 11

2: In which month respectively the max temperature of Kabul is 2nd highest and min temperature of Sydney is highest?

- (1) **1stoct& 1stjan** (2) 1stoct& 1stnov (3) 1stdec& 1stjan (4) 1stsept& 1stjan (5) 1stdec& 1st Sept

ANS: (1)

3: In which month on 1st day is the difference between the max temperature & min temperature of Bhuj second highest?

- (1) 1stsept (2) 1stoct **(3) 1stnov** (4) 1stdec (5) 1stjan

ANS: (3) Temperature difference of Bhuj: 1st Sept: 24-14=10°C, **1st Nov: 19-8=11°C**,
1st Oct: 35-21=14°C, 1st Dec: 9-2=7°C, 1st Jan -4+7=3°C

4: What is the average maximum temperature of Beijing over all the months together.

- (1) 8.4 °C (2) 9.6 °C (3) 7.6 °C (4) 9.2 °C **(5) 8.6 °C**

ANS: (5) Max temperature = 12+9+15+2+5/5 = 43/5=8.6°C

5: What is the respective ratio between the min temperature of Beijing on 1stsept & the max temperature of Ontario on 1stOct ?

- (1) 3:4 **(2) 3:5** (3) 4:5 (4) 1:5 (5) 1:4

ANS: (2) required ratio = 9:15 = 3:5

2. Study the following table carefully answer the questions percentage of marks obtained by 6 students in 6 different subjects.

Sub/student	History (out of 50)	Geography (out of 50)	Maths(out 150)	Science(out 100)	English (out of 75)	Hindi (out of 75)
Amit	76	85	69	73	64	88
Bharat	84	80	85	78	73	92
Umesh	82	67	92	87	69	76
Nikhil	73	72	78	69	58	83
Pratiksha	68	79	64	91	66	65
Ritesh	79	87	88	93	82	72

1. What is the approximately the integral % of marks obtained by umesh in all the subjects?

- (1) **80%** (2) 84% (3) 86% (4) 78% (5) 77%

$$\begin{aligned}\text{ANS: (1) Total marks obtained by Umesh} &= 41+33.5+92/100*150+87+69/100*75+76/100*5 \\ &= 41+33.5+138+87+51.75+57=408.25\end{aligned}$$

$$\text{Required \%} = 408/500*100=80\%$$

2. What is the avg % of marks obtained by all the students in hindi (approximated to two places of decimal)

- (1) 77.45% (2) **79.33%** (3) 75.52% (4) 73.52% (5) None of these

$$\text{ANS: (2) Required avg of \% in hindi} = 88+92+76+83+65+72/6=476/6=79.33\%$$

3. What is the average marks of all the students in Mathematics?

- (1) 128 (2) 112 (3) **118** (4) 138 (5) 144

$$\text{ANS: (3) avg. mark in mathematics} = 15.$$

$$(69+85+92+78+64+88)/100*6 = 150*476/100*6=119$$

4. What is the average marks obtained by all the students in geography?

- (1) 38.26 (2) 37.26 (3) 37.16 (4) **39.16** (5) None of these

$$\begin{aligned}\text{ANS: (4) Average marks in geography} &= 50(85+80+67+72+79+87)/6*1/100 \\ &= 50*470/6*1/100 = 39.16\end{aligned}$$

5. What are the total marks obtained by pratiksha in all the subjects taken together?

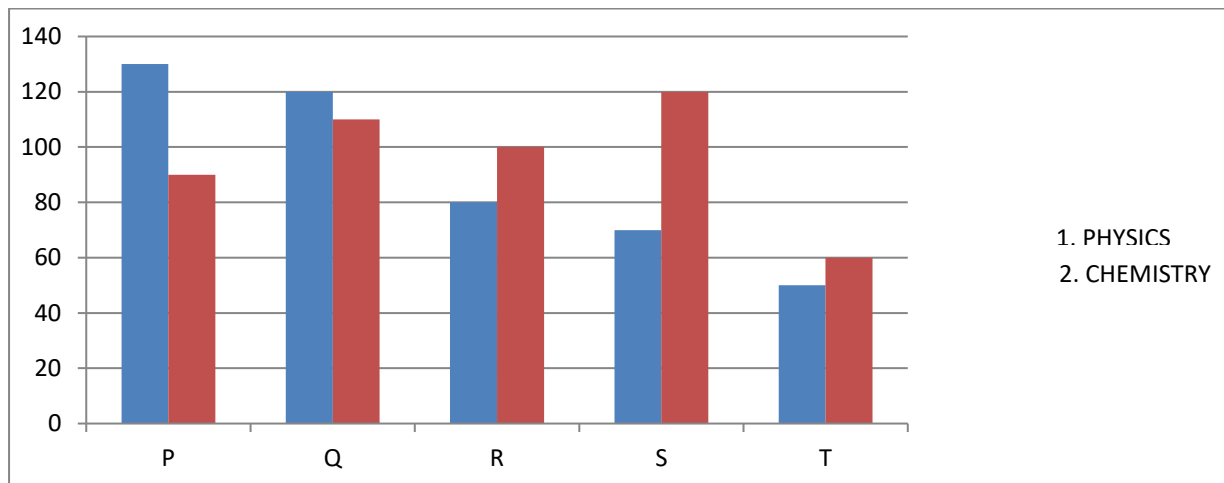
- (1) 401.75 (2) 410.75 (3) 402.75 (4) 420.75 (5) **None of these**

$$\text{ANS: (5) marks obtained by}$$

$$\begin{aligned}\text{Ritesh} &= 50*68/100+50*79/100+150*64/100+91+75*66/100+50*86/100+75*65/100 \\ &= 34+39.5+96+91+49.5+48.75 = 358.75\end{aligned}$$

BAR GRAPHS

1. Study the following bar graphs carefully to answer these questions. Marks obtained by 5 students in physics & chemistry.



1. Marks obtained by S in chemistry is what percent of the total marks obtained by all the students in chemistry?

(1) **25** (2) 28.5 (3) 35 (4) 31.5 (5) 22

ANS: (1) required $\% = \frac{120}{90+110+100+120+60} \times 100 = \frac{120}{480} \times 100 = 25\%$

2. If the marks obtained by T in physics were increased by 14% of the original marks, what would be his new approximate % in physics if the max marks in physics were 140?

(1) 57 (2) 32 (3) 38 (4) 48 (5) **41**

ANS: (5) increase in marks in physics of T = $50 \times 1.14 = 57$. Required $\% = \frac{57}{140} \times 100 = 40.7 = 41$

3. What is the respective ratio between the total obtained by P in physics & chemistry together to the total marks obtained by T in physics & chemistry together?

(1) 3:2 (2) 4:3 (3) 5:3 (4) **2:1** (5) None of these

ANS: (4) required ratio = $\frac{130+90}{60+50} = \frac{220}{110} = 2:1$

4. What is the respective ratio between the total marks obtained by Q & S together in chemistry to the total marks obtained by P & R together in physics?

(1) 23:25 (2) **23:21** (3) 17:19 (4) 17:2 (5) None of these

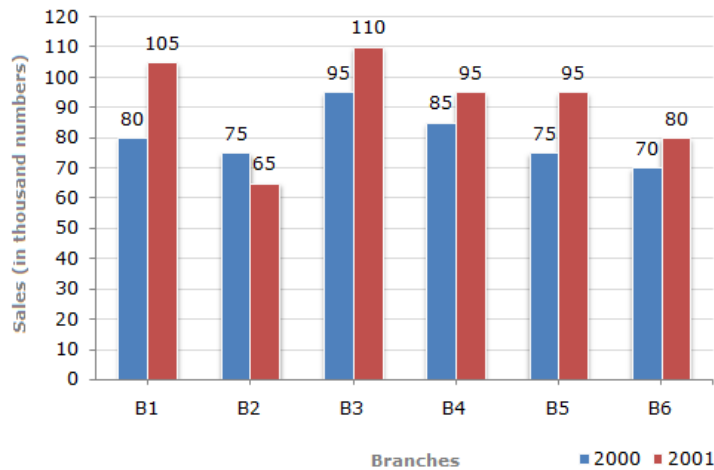
ANS: (2) Marks obtained by Q & S in chemistry = $110+120=230$.

Marks obtained by P & R in physics = $130+80=210$.

Required ratio = $230/210 = 23:21$.

2. The bar graph given below shows the sales of books (in thousand number) from six branches of a publishing company during two consecutive years 2000 and 2001.

Sales of Books (in thousand numbers) from Six Branches - B1, B2, B3, B4, B5 and B6 of a publishing Company in 2000 and 2001.



1. What is the ratio of the total sales of branch B2 for both years to the total sales of branch B4 for both years?

A. 2:3 B. 3:5 C. 4:5 **D. 7:9**

Ans: D

Explanation: Required ratio = $\frac{(75 + 65)}{(85 + 95)} = \frac{140}{180} = \frac{7}{9} = 7:9$

2. Total sales of branch B6 for both the years is what percent of the total sales of branches B3 for both the years?

A. 68.54% B. 71.11% **C. 73.17%** D. 75.55%

Ans: 73.17%

Explanation: Required percentage = $\frac{70+80}{95+110} \times 100 = \frac{150}{205} \times 100 = 73.17$

3. What percent of the average sales of branches B1, B2 and B3 in 2001 is the average sales of branches B1, B3 and B6 in 2000?

A. 75% B. 77.5% C. 82.5% **D. 87.5%**

Ans: 87.5%

Explanation:

Average sales (in thousand number) of branches B1, B3 and B6 in 2000 = $\frac{1}{3} \times (80 + 95 + 70) = \frac{245}{3}$

Average sales (in thousand number) of branches B1, B2 and B3 in 2001 = $\frac{1}{3} \times (105 + 65 + 110) = \frac{280}{3}$

Therefore, Required percentage = $= \frac{\frac{245}{3}}{\frac{280}{3}} \times 100 = \frac{245}{280} \times 100 = 87.5$

4. What is the average sales of all the branches (in thousand numbers) for the year 2000?

A. 73 **B. 80** C. 83 D. 88

Ans: 80

Explanation: Average sales of all the six branches (in thousand numbers) for the year 2000 =

$$\frac{1}{6} \times (80 + 75 + 95 + 85 + 75 + 70) = 80$$

5. Total sales of branches B1, B3 and B5 together for both the years (in thousand numbers) is ?

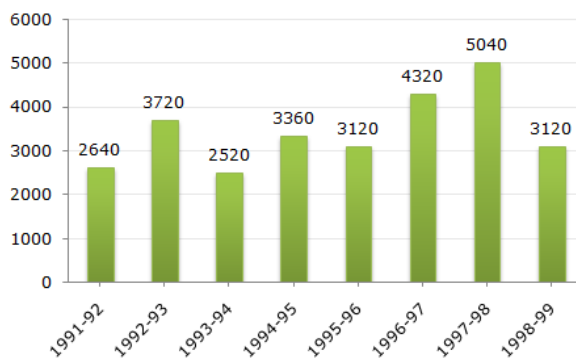
A. 250 B. 310 C. 435 **D. 560**

Explanation: Total sales of branches B1, B3 and B5 for both the years (in thousand numbers)

$$= (80 + 105) + (95 + 110) + (75 + 95) = 560.$$

3. The bar graph given below shows the foreign exchange reserves of a country (in million US \$) from 1991 - 1992 to 1998 - 1999.

Foreign Exchange Reserves of a Country. (in million US \$)



1. The ratio of the number of years, in which the foreign exchange reserves are above the average reserves, to those in which the reserves are below the average reserves is?
- A. 2:6 B. 3:4 **C. 3:5** D. 4:4

Ans: 3:5

Explanation: Average foreign exchange reserves over the given period = 3480 million US \$.

The country had reserves above 3480 million US \$ during the years 1992-93, 1996-97 and 1997-98, i.e., for 3 years and below 3480 million US \$ during the years 1991-92, 1993-94, 1994-95, 1995-96 and 1998-99 i.e., for 5 years.

Hence, required ratio = 3:5.

2. The foreign exchange reserves in 1997 - 98 was how many times that in 1994-95?
- A. 0.7 B. 1.2 C. 1.4 **D. 1.5**

Ans: 1.5

Explanation: Required ratio = $\frac{5040}{3360} = 1.5$

3. For which year, the percent increase of foreign exchange reserves over the previous year, is the highest?
- A. 1992-93** B. 1993-94 C. 1994-95 D. 1996-97

Ans: 1992-93

Explanation: There is an increase in foreign exchange reserves during the years 1992 - 1993, 1994 - 1995, 1996 - 1997, 1997 - 1998 as compared to previous year (as shown by bar-graph).

The percentage increase in reserves during these years compared to previous year are:

$$\text{For } 1992 - 1993 = \frac{3720 - 2640}{2640} \times 100 = 40.91$$

$$\text{For } 1996 - 1997 = \frac{4320 - 3120}{3120} \times 100 = 38.46$$

$$\text{For } 1997 - 1998 = \frac{5040 - 4320}{4320} \times 100 = 16.67$$

Clearly, the percentage increase over previous year is highest for 1992 - 1993.

4. The foreign exchange reserves in 1996-97 were approximately what percent of the average foreign exchange reserves over the period under review?

A. 95% B. 110% C. 115% **D. 125%**

Ans: 125%

Explanation: Average foreign exchange reserves over the given period

$$= \frac{1}{8} \times (2640 + 3720 + 2520 + 3360 + 3120 + 4320 + 5040 + 3120)$$

$$= 3480 \text{ million US \$}$$

Foreign exchange reserves in 1996 - 1997 = 4320 million US \$.

$$\text{Required percentage} = \frac{4320}{3480} \times 100 = 124.14 \approx 125.$$

5. What was the percentage increase in the foreign exchange reserves in 1997-98 over 1993-94?

A. 100 B. 150 C. 200 D. 620

Ans: 100%

Explanation: Foreign exchange reserves in 1997 - 1998 = 5040 million US \$.

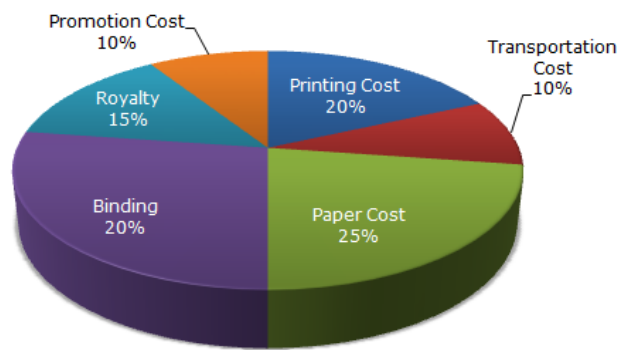
Foreign exchange reserves in 1993 - 1994 = 2520 million US \$.

$$\text{Increase} = 5040 - 2520 = 2520 \text{ US \$}.$$

$$\text{Percentage increase} = \frac{2520}{2520} \times 100 = 100$$

4. The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.

Expenditures (in percentage) Incurred in Publishing a Book



1. If for a certain quantity of books, the publisher has to pay Rs. 30, 600 as printing cost, then what will be amount of royalty to be paid for these books?

A. Rs.19,450 B. Rs.21,200 **C. Rs.22,950** D. Rs.26,150

Ans: Rs.22,950

Explanation: Let the amount of Royalty to be paid for these books be Rs. r .

$$\text{Then, } 20 : 15 = 30600 : r \Rightarrow \frac{30600 \times 15}{20} = \text{Rs. } 22,950$$

2. What is the central angle of the sector corresponding to the expenditure incurred on Royalty?
A. 15° B. 24° **C. 54°** D. 48°

Ans: 54°

Explanation: Central angle corresponding to Royalty = $(15\% \text{ of } 360)^\circ = \left(\frac{15}{100} \times 360\right)^\circ = 54^\circ$

3. The price of the book is marked 20% above the C.P. If the marked price of the book is Rs. 180, then what is the cost of the paper used in a single copy of the book?
A. Rs.36 **B. Rs.37.50** C. Rs.42 D. Rs.44.25

Explanation:

Clearly, marked price of the book = 120% of C.P.

Also, cost of paper = 25% of C.P

Let the cost of paper for a single book be Rs. n .

$$\text{Then, } 120 : 25 = 180 : n \Rightarrow n = \frac{25 \times 180}{120} = \text{Rs. } 37.50$$

4. If 5500 copies are published and the transportation cost on them amounts to Rs. 82500, then what should be the selling price of the book so that the publisher can earn a profit of 25%?
A. Rs.187.50 B. Rs.191.50 C. Rs.175 D. Rs.180

Ans: **Rs.187.50**

Explanation:

For the publisher to earn a profit of 25%, S.P. = 125% of C.P.

Also Transportation Cost = 10% of C.P.

Let the S.P. of 5500 books be Rs. x .

$$\text{Then, } 10 : 125 = 82500 : x \Rightarrow x = \frac{125 \times 82500}{10} = 1031250, \text{ Rs}$$

$$\text{S.P. of one book} = \text{Rs. } \frac{1031250}{5500} = 187.50$$

5. Royalty on the book is less than the printing cost by:

A. 5% B. $33 \frac{1}{5} \%$ C. 20% **D. 25%**

Ans: **25%**

Explanation:

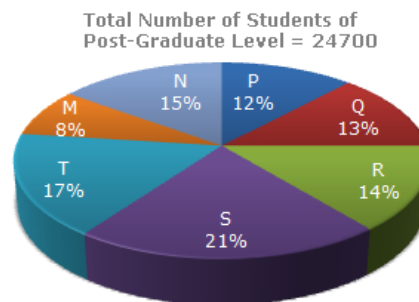
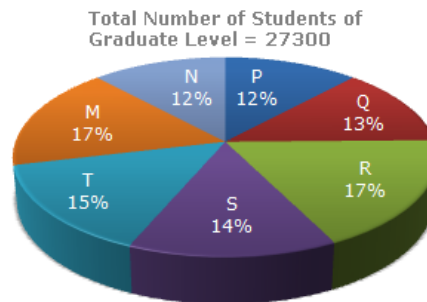
Printing Cost of book = 20% of C.P.

Royalty on book = 15% of C.P.

Difference = (20% of C.P.) - (15% of C.P.) = 5% of C.P.

$$\text{Percentage difference} = \frac{\text{difference}}{\text{printing cost}} \times 100 = \frac{5\% \text{ of C.P.}}{\text{Printing Cost}} \times 100 = 25\%$$

1. The following pie-charts show the distribution of students of graduate and post-graduate levels in seven different institutes in a town.



Distribution of students at graduate and post-graduate levels in seven institutes

1. What is the total number of graduate and post-graduate level students in institute R?
A. 8320 B. 7916 C. 9116 **D. 8099**

Ans: 8099

Explanation: Required number = (17% of 27300) + (14% of 24700) = 4641 + 3458 = 8099.

2. What is the ratio between the number of students studying at post-graduate and graduate levels respectively from institute S?

A. 14:19 B. 19:21 C. 17:21 **D. 19:14**

Ans: 19:14

Explanation: Required ratio = $\frac{(21\% \text{ of } 24700)}{(14\% \text{ of } 27300)} = \frac{(21 \times 24700)}{14 \times 27300} = \frac{19}{14}$

3. How many students of institutes of M and S are studying at graduate level?

A. 7516 **B. 8463** C. 9127 D. 9404

Explanation: Students of institute M at graduate level = 17% of 27300 = 4641.

Students of institute S at graduate level = 14% of 27300 = 3822.

Total number of students at graduate in institutes M and S = $(4641 + 3822) = 8463$

4. What is the ratio between the number of students studying at post-graduate level from institutes S and the number of students studying at graduate level from institute Q?

A. 13:19

B. 21:13

C. 13:8

D. 19:13

Explanation: Required ratio = $\frac{21\% \text{ of } 24700}{13\% \text{ of } 27300} = \frac{21 \times 24700}{13 \times 27300} = \frac{19}{13}$

5. Total number of students studying at post-graduate level from institutes N and P is

A. 5601

B. 5944

C. 6669

D. 8372

Explanation: Required number = $(15\% \text{ of } 24700) + (12\% \text{ of } 24700) = 3705 + 2964 = 6669$

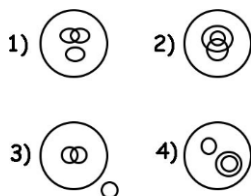
VENN DIAGRAM

1. Which of the following Venn- diagram correctly illustrates the relationship among the classes : Tennis fans, Cricket players, Students



Ans. 1

2. In a dinner party both fish and meat were served. Some took only fish and Some only meat. There were some vegetarians who did not accept either. The rest accepted both fish and meat. Which of the following Venn-diagrams correctly reflects this situation?



Ans. 1

UNIT-2

1 In each of the following questions, a number series is given with one term missing. Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

1. 1,9,25,49,?,121

a)64

b)81

c)91

d)100

()

2. 11,13,17,19,23,25,?

a)26

b)27

c)29

d)37

()

3. 6,11,21,36,56,?

- a)42 b)51 **c)81** d)91 ()

4. 10,18,28,40,54,70,?

- a)85 b)86 c)87 **d)88** ()

5. 22,24,28,?,52,84

- a)36** b)38 c)42 d)46 ()

6. 28,33,31,36,?,39

- a)32 b)34 c)38 d)40 ()

7. 6, 17, 39, 72, ?

- a)83 b)94 **c)116** d)127 ()

8. 325,259,204.160,127,105,?

- a)94** b)96 c)98 d)100 ()

II In each of the following questions, one term in the number series is wrong. Find out the wrong term

1.3,10,27,4,16,64,5,25,105

- a)3 b)4 c)10 d)27 ()

2. 8,13,21,32,47,63,83

- a)13 b)21 c)32 **d)47** ()

3. 105,85,60,30,0,-45,-90

- a)105 b)60 **c)0** d)-45 ()

4. 325,259,202,160,127,105,94

- a)94 b)127 **c)202** d)259 ()

5. 1,2,4,8,16,32,64,96

- a)4 b)32 c)64 **d)96** ()

6. 10,26,74,218,654,1946,5834

- a)26 b)74 c)218 **d)654** ()

7. 1,3,10,21,64,129,356,777

- a)21 b)129 c)10 **d)356** ()

8. 3,4,10,32,136,685,4116

a)10 **b)32** c)136 d)4116 ()

III In each of the following questions, various terms of an alphabet series are given with one or more terms missing as shown by (?). Choose the missing terms out of the given alternatives.

1. R, U, X, A, D,?

a)F **b)G** c)H d)I ()

2. T, R, P, N, L,?,?

a)J,G **b)J,H** c)K,H d)K,I ()

3. a,b,c,f,?,h, g,?,i

a)e,j b)e,k c)f,j d)j,e ()

4. Z,Y,X,U,T,S,P,O,N,K,?,?

a)G,H b)H,I c)I,H **d)J,I** ()

5. A,B,N,C,D,O,E,F,P,?,?,?

a)G,H,I b)G,H,J **c)G,H,Q** d)J,K,L ()

6. A,B,B,D,C,F,D,H,E,?,?

a)E,F b)F,G c)F,I **d)J,F** e) j,k ()

7. C,Z,F,X,I,V,L,T,O,?,?

a)O,P b)P,Q **c)R,R** d)S,R ()

8. AB,DEF,HIJK,?,STUVWX

a)LMNO b)LMNOP **c)MNOPQ** d)QRSTU ()

IV In each of the following questions, a letter-number series is given with one or more terms mission as shown by (?). Choose the missing term out of the given alternatives.

1. D-4, F-6, H-8, J-10, ?, ?

a) K -12, M-13 b)L-12,M-14 **c)L-12,N-14** d)K-12,M-14 ()

2. 3F,6G, 11I, 18L, ?

a)21O b)25N c)25P **d)27P** e) 27Q ()

3. W-144, ?, S-100, Q-81, O-64

a)U-121 b) U-122 c)V-121 d)V-128 ()

4. 2Z5, 7Y7, 14X9, 23W11, 34V13, ?

a)27U24 b)45U15 c)**47U15** d)47V14 ()

5. N5V, K7T, ? ,E14P, B19N

a)H9R b)H10Q c)**H10R** d)I10R ()

6. find the term which does not fit into the series

1CV, 5FU, 9IT, 15LS, 17OR

a)5FU b)**15LS** c)9IT d)17OR ()

7. Q1F, S2E, U6D, W21C, ?

a)Y44B b)Y66B c)**Y88B** d)Z88B ()

V In each of the following letter series, some of the letters are missing which are given in that order as one of the alternatives below it. Choose the correct alternative.

1. _ _ aba _ _ ba _ ab

a)abbba b)**abbab** c)baabb d)bbaba ()

2. ab _ _ baa _ _ ab _

a)aaaaa b)**aabaa** c)aabab d)baabb ()

3. a _ ba _ b _ b _ a _ b

a)abaab b)abbab c)aabba d)**bbabb** ()

4. _ op _ mo _ n _ _ pnmop _

a)**mnpmon** b)mpnnop c)mnompn d)mnpomn ()

5. _ nmmn _ mmnn _ mnnm _

a)nmmn b)mnnm c)**nnmm** d)nmnm ()

6. ba _ cb _ b _ bab _

a)acbb b)**back** c)bcaa d)cabb ()

7. _ aa _ ba _ bb _ ab _ aab

a)aaabb b)babab c)**bbaab** d)bbbaa ()

8. ab _ d _ aaba _ na _ badna _ b

a)**andaa** b)babda c)badna d)dbanb ()

VI Find out the relationship between the first two words and choose the word from the given alternatives.

1. Anaemia : Blood :: Anarchy : ?

a) **Lawlessness** b) Government c) Monarchy d) Disorder ()

2. Botany : Plants :: Entomology : ?

a) Snakes b) **Insects** c) Birds d) Germs ()

3. Menu : Food :: Catalogue :

a) Rack b) Newspaper c) Library d) **Books** ()

4. Pulp : Paper :: Hemp : ?

a) Basket b) Yarn c) **Rope** d) Cotton ()

5. Moon : Satellite :: Earth : ?

a) Sun b) **Planet** c) Solar System d) Asteroid ()

6. Coconut : Shell :: Letter : ?

a) Letter – Box b) Stamp c) Mail d) **Envelope** ()

7. Assam : Bihu :: Kerala : ?

a) **Kathakali** b) Kuchipudi c) Kathak d) Bharanatyam ()

8. Man : Machine :: Master : ?

a) **Worker** b) Manager c) House d) Slave ()

VII

1. Necklace is related to Jewellery in the same way as Shirt is related to ?

a) Thread b) Cloth c) Cotton d) **Apparel** ()

2. Needle is related to Thread in the same way as Pen is related to ?

a) **Ink** b) Cap c) Paper d) Word e) Stationery ()

3. Drama is related to Director in the same way as Magazine is related to ?

a) Story b) **Editor** c) Reader d) Printer ()

4. Wax is related to Grease in the same way as Milk is related to ?

a) Drink b) Gee c) **Curd** d) Protein ()

5. Impossible is related to Feasible in the same way as Theoretical is related to ?

- a) Radical b) Usable **c) Practical m** d) Workable ()
6. Cyclone is related to Anticyclone in the same way as Flood is related to ?
- a) Devastation b) Havoc c) River **d) Drought** ()
7. Earth is related to Axis in the same way as Wheel is related to ?
- a) Tyre b) Car **c) Road** d) Hub ()
8. Income is related to Profit in the same way as Expenditure is related to ?
- a) Balance **b) Loss** c) Sale d) Receipt e) Surplus ()
- VII.** Find out the relationship between the first two numbers and choose the number from the given alternatives.
1. 18 : 30 :: 36 : ?
- a) 54 b) 62 c) 64 **d) 66** ()
2. 6 : 222 :: 7 : ?
- a) 210 b) 336 c) 343 **d) 350** ()
3. 14 : 9 :: 26 : ?
- a) 12 b) 13 **c) 15** d) 31 ()
4. 8 : 28 :: 27 : ?
- a) 55 **b) 63** c) 64 d) 65 ()
5. 68 : 130 :: ? : 350
- a) 210 b) 216 **c) 222** d) 240 ()
6. 42 : 56 :: 72 : ?
- a) 81 **b) 90** c) 92 d) 100 ()
7. 9 : 80 :: 100 : ?
- a) 901 b) 1009 c) 9889 **d) 9999** ()
8. 149 : 238 :: 159 : ?
- a) 169 **b) 248** c) 261 d) 268 ()

UNIT- 3

BODMASRULE AND SIMPLIFICATION

1. $12573 + 43495 + 23472 = ?$
2. $(8 \div 88) \times 8888088 = ?$

3. The value of $1001 \div 11$ of 13 is?
4. $20\frac{1}{2} + 30\frac{1}{3} - 15\frac{1}{6} = ?$
5. Simplify $2 - [2 - \{2 - 2(2 + 2)\}] = ?$
6. Simplify $18 - [5 - \{6 + 2(7 - \overline{8 - 5})\}]$.
7. $(-5)(4)(2)(-\frac{1}{2})(\frac{3}{4}) = ?$
8. Find the value of $\frac{(6+6+6+6) \div 6}{4+4+4+4 \div 4}$
9. What is the value of $\frac{(P+Q)}{(P-Q)}$ if $\frac{P}{Q} = 7$?

DECIMAL FRACTIONS

1. If $204 \div 12.75 = 16$, then $2.04 \div 1.275 = ?$
2. $0.03 \times 0.0124 = ?$
3. $7212 + 15.231 - ? = 6879$
4. $4211.01 + 22.261 - ? = 2645.759$
5. $0.004 \times 0.5 = ?$
6. $24.39 + 562.093 + 35.96 = ?$
7. $926 + 9.026 + 0.926 + 9.0026 = ?$
8. The expression $(12.86 \times 12.86 + 12.86 \times p + 0.14 \times 0.14)$ will be a perfect square for p equal to

DIVISIBILITY RULE

1. If the the number $5*2$ is divisible by 6 then *?
2. If the number $517*324$ is completely divisible by 3 , then the smallest whole number in Place of * will be.
3. If the number $481*673$ is completely divisible by 9, then the smallest whole number in Place of * will be.
4. If the number $97215*6$ is completely divisible by 11, then the smallest whole number in Place of * will be.
5. If the number $91876*2$ is completely divisible by 8, then the smallest whole number in Place of * will be.
7. Find the least value of * for which $7*5462$ is divisible by 9

8. Find the least value of * for which $4832*18$ is divisible by 11.

LCM and HCF:

1. What is the lowest common multiple of 12, 36 and 20?
2. Find the H.C.F of 108, 288 and 360.
3. Find the greatest common divisor of 24 and 16
4. Two numbers are in the ratio 2 : 3. If their L.C.M. is 48. what is sum of the numbers?
5. The ratio of two numbers is 4 : 5. If the HCF of these numbers is 6, what is their LCM?
6. The H.C.F. of two numbers is 5 and their L.C.M. is 150. If one of the numbers is 25, then the other is:
7. The H.C.F. of two numbers is 11 and their L.C.M. is 693. If one of the numbers is 77, then find the other.
8. Find L.C.M of $\frac{2}{3}, \frac{8}{9}, \frac{16}{81}$ and $\frac{10}{27}$

BLOOD REALTIONS

1. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?
2. Pointing out to a lady, a girl said, "She is the daughter-in-law of the grandmother of father's only son." How is the lady related to the girl ?
3. There are six persons A, B, C, D, E and F. C is the sister of F. B is the brother of husband. D is the father of A and grandfather of F. There are two fathers, three brothers : a mother in the group. Who is the mother ?
4. Pointing to a person, a man said to a woman, "His mother is the only daughter of your father. How was the woman related to the person ?
5. A girl introduced a boy as the son of the daughter of the father of her uncle. What is the relation between the boy and the girl ?
6. In a family, there are six members A, B, C, D, E and F. A and B are a married couple, A being the male member. D is the only son of C, who is the brother of A. E is the sister of D. B is the daughter-in-law of F, whose husband has died. How is E related to C ?
7. A woman introduces a man as the son of the brother of her mother. How is the man, related to woman ?

CALENDAR

1. What was the day on 15th august 1947 ?
2. Today is Monday. After 61 days, it will be?

3. The last day of a century cannot be?
4. What was the day of the week on, 16th July, 1776?
5. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?
6. What was the day of the week on 28th May, 2006?
7. What will be the day of the week 15th August, 2010?
8. If 6th March, 2005 is Monday, what was the day of the week on 6th March, 2004?

CLOCKS

1. A clock is set right at 8 a.m. The clock gains 10 minutes in 24 hours will be the true time when the clock indicates 1 p.m. on the following day?
2. At what time between 4 and 5 o'clock will the hands of a watch point in opposite directions?
3. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?
4. A clock is set right at 5 a.m. The clock loses 16 minutes in 24 hours. What will be the true time when the clock indicates 10 p.m. on 4th day?
5. At what time between 5 and 6 o'clock are the hands of a clock 3 minutes apart?
6. Find the angle between the hour hand and the minute hand of a clock when the time is 3.25?
7. At what angle are the hands of a clock inclined at 15 minutes past 5?
8. At what time between 2 and 3 o'clock will the hands of a clock be together?

Unit -IV

AVERAGE:

1. The average of 5, 10, 15, 20, 25?
2. Find the average of first 40 natural numbers.
3. The average of four consecutive even numbers is 27. Find the largest of these numbers.
4. The average of four consecutive odd numbers is 61. What is the difference between the highest and lowest numbers?
5. The average of 5 numbers is 15 and the average of first three numbers is 10. What is the average of last two numbers?
6. The average age of 15 students of a class is 15 years. Out of these, the average age of 5 students is 14 years and that of the other 9 students is 16 years. The age of the 15th student is?
7. The average of 5 numbers is 15 and the average of first three numbers is 10 and the average of last three numbers is 20. Then find the middle number?
8. The average of five numbers is 27. If one number is excluded, the average becomes 25. The excluded number is:

RATION & PROPORTION:

1. If $A : B = 2 : 3$ $B : C = 4 : 7$ then find $A : B : C = ?$
2. If $A : B = 2 : 3$ $B : C = 3 : 4$ then find $A : B : C = ?$
3. If $a:b=2:3$ and $b:c=3:5$ then find $a:c=?$
4. If $2A=3B$ and $4B=5C$, then $A:C$ is
5. Find the mean proportional of 9 and 25
6. Find the third proportional to 16 and 4
7. If $\frac{A}{3} = \frac{B}{4} = \frac{C}{5}$, then $A:B:C$ is
8. If $\frac{1}{5} : \frac{1}{x} :: \frac{1}{x} : \frac{1}{125}$, then the value of x is

PROBLEM ON AGES:

1. A father said his son , " I was as old as you are at present at the time of your birth. "
If the father age is 38 now, the son age 5 years back was :
2. The total age of A and B is 12 years more than the total age of B and C. C is how many years younger than A ?
3. In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is :
4. The age of a man is 4 times of his son. Five years ago, the man was nine times old as his son was that time. The present age of man is?
5. The sum of the present ages of a father and his son is 60 years. five years ago, father's age was five times the age of the son. so now the son's age will be:
6. Six years ago Anita was P times as old as Ben was. If Anita is now 17 years old, how old is Ben now in terms of P ?
7. Sachin is younger than Rahul by 7 years. If the ratio of their ages is 7:9, find the age of Sachin.
8. The ratio of the present ages of P and Q is 3 : 4. Five years ago, the ratio of their ages was 5: Find their present ages.

TIMES AND DISTANCE-SPEED

1. An athlete runs 200 metres race in 24 seconds. His speed is?
2. How many minutes does Aditya take to cover a distance of 400m, if he runs at a speed of 20 km/hr?
3. A car is running at speed of 108kmph. What distance will it cover in 15 seconds?
4. A cyclist covers a distance of 750 m in 2 min 30 sec. What is the speed in km/hr of the cyclist?
5. Peter can cover a certain distance in 1hr.24min. by covering two third of the distance at 4km

and the rest at 5kmph. Find the total distance.

6. A and B are two stations 390km apart. A train starts from A at 10 a.m. and travels towards B 65kmph. Another train starts from B at 11 a.m. and travels towards A at 35 kmph. At what time do they meet?

UNIT-V

PERCENTAGES

1. $8\frac{1}{3}\%$ expressed as fraction is ?
2. 2 is what percent of 50?
3. What percent of $\frac{1}{2}$ is $\frac{1}{3}$?
4. X% of Y is Y% of ?
5. What is 25% of 25% equal to?
6. 30% of 140 = ? % of 840
7. 5 % of (50% of Rs 300) is?
8. 270 candidates appeared in an examination, of which 252 passed. The pass percentage is.

PROFIT AND LOSS

1. A man buys a cycle for Rs.1400 and sells it at a loss of 15%. What is the selling price of the cycle?
2. The CP of 21 articles is equal to SP of 18 articles. Find the gain (or) loss percent
3. A man buys an article for Rs 27.50 and sells it for Rs 28.60. find his gain percent ?
4. An article is bought for RS. 450 and sold for Rs.400 .what is the loss%?
5. When a commodity is sold for Rs. 34.80 there is a loss of 25%, what is the cost price of commodity?
6. An article is sold at certain price. By selling it at $\frac{2}{3}$ of that price one loses 10%. Find the gain percent at original price..
7. Meena purchased two fans each at Rs.1200. She sold one fan at the loss of 5% and other at the gain 10%. Find the total gain or loss percent?

PARTNERSHIP

1. Dhilip and Manohar started a business by investing Rs.100000 and Rs.150000 respectively. Find the share of each out of a profit of Rs.24000?
2. Sanjay and Raju started a business and invested Rs.20000 and Rs.25000 respectively. After 4 months Raju left and Naresh joined by investing Rs.15000. At the end of the year there was a profit of Rs.4600. what is the share of Naresh?
3. Three partners A, B, C start a business. Twice the investment of A is equal to thrice the capital of B and the capital of B is four times the capital of C. find the share of each out of a profit of Rs.297000?
4. A, B, C hire a meadow for Rs.2934.60. A puts in 10 oxen for 20 days; B 30 oxen for 8 days and C 16 oxen for 9 days. Find the rent paid by each?
5. A and B started a business in partnership by investing Rs.8000 and Rs.7000 respectively. If at the end of a year, a profit of Rs.22,500 was earned. What is the share of A?

6. In partnership business, A has invested Rs.4200 while B has invested a certain amount. If out of the overall profit of Rs.600, A's share is Rs.320, what is the amount invested by B (in Rs)?
7. Chetan and Suman started a business in partnership by investing Rs.15000 and Rs.18000 respectively. If at the end of the year, Chetan's share in the profit was Rs.1200, what was the amount of total profit?
8. In a partnership business, A has invested 2000 for 5months, while B has invested Rs.3500 for a certain period. If out of the total annual profit of Rs.1440, B's share has been Rs.840. For how many months has he kept his investment in the business?

SIMPLE AND COMPOUND INTEREST

1. Find the simple interest on Rs 7500 in 4 years at 15% .
2. The simple interest on Rs. 6400 at $12\frac{1}{2}$ % per annum is Rs.2000, find the period
3. On what sum of money will the simple interest be Rs.2000 in 5 years 8% per annum?
4. A sum of Rs 1600 gives a simple interest of Rs252 in 2years and 4months. The rate of interest per annum is ?
5. Find the compound interest on Rs 8000 for 3years at 5% per annum
6. A sum of Rs.3000 is lent for 3 years at 10% p.a compound interest. Find the amount
7. Find the amount on Rs 7500 at 4% per annum for 2 years compounded annually.
8. Find the compound interest on Rs.15,625 for 9 months at 16% per annum compounded Quarterly.