

- Q.2)** The following details are extracted from the costing records of an oil refinery which has three continuous processes. In each process 5% of total weight is lost and 20% is scrap which is realised at Rs 10 per ton from process A and B and Rs 5 per ton from process C. The product is dealt with as follows: **(20 Marks)**

Particulars	A	B	C
Material introduced (tonnes)	1,000	550	200
Cost of Material introduced (Rs)	10,000	15,000	2,000
Wages (Rs)	4,000	2,000	6,000
Expenses (Rs)	6,000	3,000	2,000
Passed on to the next process	60%	80%	--
Sent to warehouse	40%	20%	100%

Prepare process accounts.

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- Q.3)** M/s N construction undertook a contract of Rs 1000000 on 1st August 2017. The contract was completed on 31st March 2019. The details of the contract are as follows: **(20 Marks)**

Particulars	2017-18	2018-19
Material issued	46,000	94,000
Direct wages	70,000	13,500
Direct expenses	5,000	9,500
Indirect Expenses	1,000	2,000
Work certified	4,75,000	10,00,000
Work uncertified	5,000	--
Plant issued	7,500	--
Material on site at year ended	2,500	3,500
Architects fees	4% of work certified	4% of work certified
Cash received	80% of work certified	80% of certified

Charge depreciation on plant @20% p.a. on original cost.

Prepare contract A/C for the year 2017-18 and 2018-19

- Q.4)** a) K.G. undertakes large contracts. The position of bridge contract which commenced on 1st April 2018 is as follows:

(10 Marks)

Material purchased	--	Rs 60,000
Wages paid	--	Rs 70,000
Sundry expenses	--	Rs 3,000
Plant installed	--	Rs 10,000
Wages accrued	--	Rs 1,000

On 31st March 2019, Material in hand was Rs 2,400. The value of work certified was Rs 14,4,000 of which Rs 1,08,000 has been received. The work finished but uncertified was valued at Rs. 4,000. The plant at site on 31st March 2019 was valued at Rs 8,000. The contract price was Rs 2,40,000.

b) The following particulars have been extracted from the books of M/s. T Ltd for the year ended 31-03-2019. **(10 Marks)**

Particulars	Rs
<u>Opening Inventories</u>	
Finished stock Rs 60,000	
Raw material Rs 50,000	
Work-in-progress Rs 70,000	1,80,000
Building at cost	2,25,000
Material purchased	25,000
Fright incurred on materials	3,500
Direct labour	15,700
Carriage & freight outwards	6,500
Factory supervision	6,700
Rent and rates ($\frac{2}{3}$ to factory)	9,000
Office salaries	75,000
Depreciation on machinery	15,000
Managers remuneration	50,000

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Further details are available as follows:

- i) The manager has the over all charges of the company and his remuneration is to be allocated as Rs 20,000 to the factory, Rs 15,000 to the office and Rs 15,000 to the selling department.
- ii) Closing inventories:- Finished goods Rs 15,000 raw materials Rs 18,000 and work-in-progress Rs 19,200.
- iii) Depreciation to be provided on building @ 10% p.a. and building is apportioned to factory, office and selling in the ratio 6:2:2 respectively.

- Find i) D_6 (6th decile)
 ii) P_{94} (94th percentile)

c) For data given

(7)

Commodity	Year 1975		Year 1985	
	A	6	10	10
B	--	16	9	20
C	3	23	4	25

If Laspeyre's price Index no = Paasche's price index no.
 Find missing value.

OR

Q.2) w) States methods of collecting primary data.

(3)

x) For data given median = 28 find missing value.

(6)

Class interval	0-10	10-20	20-30	30-40	40-50
frequency	5	15	-	18	11

y) i) Calculate real income and state which year income was highest.

(4)

Years	2001	2002	2003	2004	2005
Income (Rs)	700	840	980	1050	1100
Index No	140	175	200	210	220

ii) Reconstruct index numbers by shifting base to year 2000.

(3)

Years	2000	2001	2002	2003
Price	110	105	108	120

Q.3) a) Explain Pie-Diagram in brief

(3)

b) Draw trend line by method of semi-Averages.

(6)

Years	2001	2002	2003	2004	2005	2006
No of Students	330	335	340	345	353	349

Hence find from graph trend value for no. of students in year 2007

c) Following is information regarding monthly salary paid to employees of two Banks A and B.

(7)

Bank	No of employees	Average monthly salary in Rs.	Variance
A	500	186	81
B	600	175	100

- What is combined arithmetic mean of monthly salary of all employees taken together.
- Which banks has greater variability or changes in individual salary or which Bank is stable in salary.
- Which Bank pays larger salary bill per month.

OR

Q.3) w) State true or false **(3)**

- Pie diagram is one dimensional diagram.
- Median is located by drawing ogive graph.
- Ogives are not called cumulative frequency curves.

- x) Find five yearly moving averages for no of students studying in Commerce College. State for which year value is highest. **(6)**

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008
No of students	332	217	357	402	410	427	450	348	518

- y) Find Bowley's measure of skewness. **(7)**

Class interval	0-1	2-4	4-6	6-8
Frequency	2	3	1	4

Q.4) a) i) With which component will you associate following given. **(3)**

“ Heavy rise in petrol due to war”

- State multiplicative model of time series.
- Give one example of one dimensional Diagram.

- b) Fit a straight line or linear trend by method of least squares. **(6)**

Years	2002	2003	2004	2005	2006	2007	2008
Sales in (thousands)	77	88	94	85	91	98	90

Hence find sales for year '2009'

- c) Find **(7)**
- Standard deviation
 - Variance
 - Coefficient of variance

Marks	0-10	10-20	20-30	30-40	40-50
No of Students	10	21	23	34	10

- Q.4) w) i) With which component of time, series will you associate following given. (3)
 “Continuous increasing demand for cell phones in India”
 ii) Define Time series in one sentence only.
 iii) How points are joined after plotting points for frequency curve and polygon on graph.
 x) Fit a straight line or linear trend by method of least squares. (6)

years	2001	2002	2003	2004	2005	2006
Assets	100	96	108	116	110	118

Hence estimate the value of assets for year ‘2008’

- y) Find Karl Pearson’s coefficient of skewness. (7)

Class interval	0-10	10-20	20-30	30-40	40-50
Frequency	5	7	20	12	6

Median given 26.19

- Q.5) a) Explain univariate table for frequency distribution. (3)
 b) For data given regarding weekly expenditure of 7 boys. (6)
 Weekly expenditure: 18,20,35,41,28,15,13
 Calculate i) Quartile deviation (Semi inter - quartile range)
 ii) Coefficient of Quartile deviation.

- c) Calculate cost of living index no for middle class family for following data. (7)

Group	Food	Light	Clothing	Rent	Other expenses
Index No. ‘I’	350	240	250	180	100
Weight ‘W’	40	20	10	15	18

OR

- Q.5) w) Define i) Relative frequency ii) Class mark (3)
 iii) Give one example of discrete variate and continuous variate each.
 x) Find mean deviation from median for following data and also find coefficient (6)
 44,88,47,37,59,44,78
 y) Calculate (7)
 i) Simple aggregative price index no.
 ii) Weighted aggregative price index no.
 for following data.

Group expenses	Weight	Price in 1985	Price in 1980
I	30	70	35
II	13	30	30

