

SUGGESTED ANSWERS TO QUESTIONS

SECTION-A

1.
 - (i) (B)
 - (ii) (A)
 - (iii) (C)
 - (iv) (C)
 - (v) (B)
 - (vi) (B)
 - (vii) (B)
 - (viii) (A)
 - (ix) (B)
 - (x) (C)

SECTION-B

2 (a)

- (i) Total Net Present Value (NPV) of the proposal for overhauling of the machine Z = ₹ -16031705
- (ii) Total Net Present Value (NPV) of the proposal for replacing new parts of Machine Z = ₹ -15554944
- (iii) Advice: Since net present value of cash out flow of replacing parts for machine is lower than the net present value of cash outflow of overhauling machine z, it is better to replace the parts of Machine Z resulting in decline of outflow by Rs. 476761.

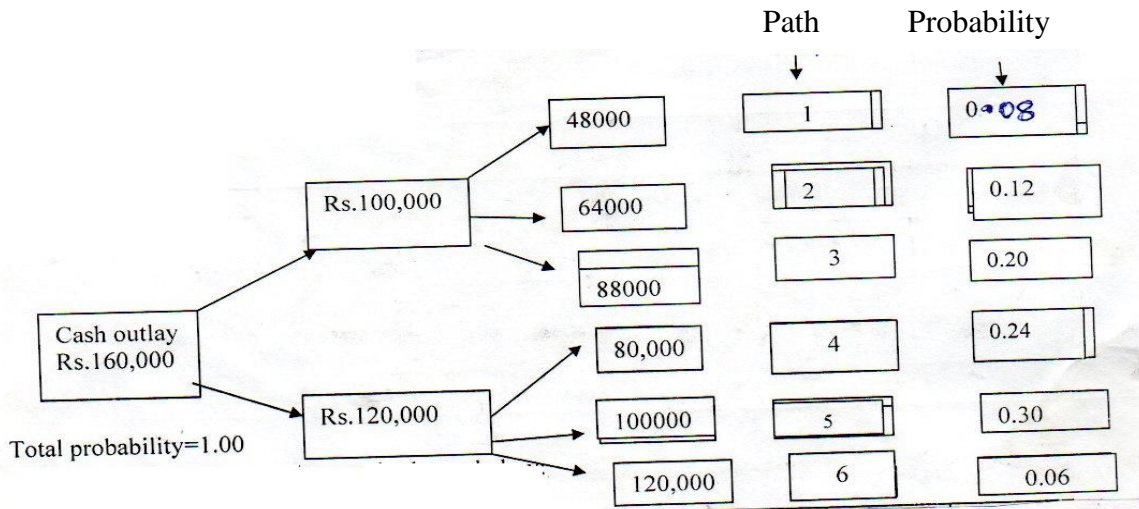
2 (b)

The features of Securitization are enumerated below:

- (i) Creation of financial instruments- The process of securities can be viewed as process of creation of additional financial product of securities in market backed by collaterals.
- (ii) Bundling and Unbundling-When all the assets are combined in one pool it is bundling and when these are broken into instruments of fixed denomination it is unbundling.
- (iii) Tool of Risk Management- In case of assets are securitized on on-resource basis, then securitization process acts as risk management as the risk of default is shifted.
- (iv) Structured finance- In the process of securitization, financial instruments are tailor structured to meet the risk return trade of profile of investor, and hence, these securitized instruments are considered as best examples of structured finance.
- (v) Trenching-Portfolio of different receivable or loan or asset are split into several parts based on risk and return they carry called "Tranche". Each Trench carries a different level of risk and return.
- (vi) Homogeneity-Under each tranche the securities issued are of homogenous nature and even meant for small investors who can afford to invest in small amounts.

3 (a)

(i)



Decision Tree

(ii) Expected NPV

Path	Expected NPV
1	(2,356.16)
2	(1,948.32)
3	717.60
4	3,638.40
5	9,504.00
6	2,892.00
	12,447.52

- (iii) If the worst outcome is realized the NPV which the project will yield is Rs.29452 (negative). The probability of occurrence of this NPV is 8%.
- (iv) Probability of negative NPV: = 0.20 i.e. 20%
- (v) Suggestion: Since the total expected net present value (ENPV) is positive of Rs. 12447.52 based on joint probability, the company is suggested to accept the project.

3 (b)

Components of digital infrastructure include the following: (Any six)

(1) Internet

The internet connects vast range of information resources and services, acts a prime enabler or connecting force that integrates the digital world including digital finance.

(2) Mobile telecom and digital communication suites, including applications

These connect various organizations to a common network and enables communication for digital transaction.

(3) Data centres and networks

It is a physical facility that organizations use to house their critical applications and data.

(4) Enterprise portals, platforms, systems and software

It is a framework for integration information, people and processes across organization boundaries, provides secure and unified access point.

(5) Cloud Services

These are designed to easy and affordable access to application and resources and without the need for internal infrastructure or hardware.

(6) Operational security, user identity and data encryption

It is a security and risk management process that prevents sensitive information from getting into wrong hands

(7) APIs and integrations

An application programming interface (API) is a messenger that processes request and ensures seamless functioning of enterprise systems.

4 (a)

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|-------------------------------------|------------|
| (i) Straight Value of Bond = | Rs. 974.96 |
| (ii) Conversion Value of the Bond = | Rs. 1125 |
| (iii) Conversion premium = | Rs.2 |
| (iv) Percentage of downside risk = | 20.52% |
| (v) Conversion Parity Price = | Rs. 47 |

4 (b)

(i) Number of Units in each Scheme

MF-A	=12944.98
MF-N	=39603.96
MF-P	=20000.00

(ii) Total NAV on 31.03.2023 = Rs.1099153.19

(iii) Total yield; = Rs.17153.19

Total Yield = 1.5594%

(iv) No. of days investment held:

MF-A = 173 days

MF-N = 31 days

MF-P = 71 days

5 (a)

Amount to be invested in Stock (C) is Rs. 7,31,200 and in Debenture is Rs. 3,68,800.

5 (b)

(i) Rank the Mutual Funds as per Sharpe's measure.

Mutual Fund	R_p	R_r	$R_p - R_r$	σ_p	Reward to Variability	Ranking
MF-S	10.00	7.00	3.00	1.63	1.84	2
MF-T	7.67	7.00	0.67	2.05	0.33	3
MF-Z	14.00	7.00	7.00	3.27	2.14	1

(ii) Rank the Mutual Funds as per Treynor's measure.

Mutual Fund	R_p	R_t	$R_p - R_t$	β_p	Reward to Volatility	Ranking
MF-S	10.00	7.00	3.00	0.244	12.30	1
MF-T	7.67	7.00	0.67	0.171	3.92	3
MF-Z	14.00	7.00	7.00	0.709	9.87	2

6 (a)

(i) Portfolio Beta = 1.5

(ii) The value of risk free securities to be acquired. = ₹ 2500 lakh

(iii) Number of Shares of each company to be disposed off.

Shares	No. of Shares (lakhs)
A Ltd.	2.50
B Ltd.	1.50
C Ltd.	1.25

(iv) Number of Nifty Contracts to be sold = 150 contracts

(v) Value of portfolio beta for 4% rise in Nifty = 1.125

6 (b)

(i) Mr. ZETSON should purchase 0.5 share for every 1 call option.

(ii) If price of share comes out to be ₹780 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹780)	₹390
Loss on account of Short Position (₹780 – ₹630)	₹150
	₹240

If price of share comes out be ₹480 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹480)	₹240
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(iii) Value of call option at the beginning of the period. = Rs. 65.85

(iv) Expected Return on the Option: = 36.67%

7 (a)

- (i) Total Outflow under Option-1 = Rs. 76.7529 Crore
- (ii) Total Outflow under Option-2 = Rs. 76.9439 Crore

Advice: Since cash outflow is least under option-1, it is better to avail loan from bank.

7 (b)

Forward Market Cover

Hedge the risk by buying Can\$ in 1 and 3 months time will be:

July= US \$ 939401

Sept.= US \$ 659598

Option Contracts:

July Payments = 20.20

Sept. Payments = 14.10

Company would like to take out 20 contracts for July and 14 contracts for September respectively. Therefore costs, if the options were exercised, will be:

	July		September	
	Can\$	US\$	Can\$	US\$
Covered by Contracts	1000000	940000	700000	665000
Balance bought at spot rate	10000	9301	5000	4678
Option Costs:		10200		11480
Total cost in US\$ of using Option Contract		959501		681158

Decision: As the firm is stated as risk averse and the money due to be paid is certain, a fixed forward contract, being the cheapest alternative in both the cases, would be recommended.

SECTION –C**8**

Equivalent Annual Costs (EAC):

- (i) Alternative-1 = Rs. 26.76 lakh
- (ii) Alternative-2 = Rs. 24.32 lakh
- (iii) Alternative-3 = Rs. 26.58 lakh
- (iv) Alternative-2: (Buy larger property, locally) may be recommended for acceptance to the company, since this alternative-2 looks most attractive which show the lowest equivalent annual cost (Rs. 24.32 lakh) as stated supra.