

ACCOUNTANCY

1. Singh and Gupta decided to start a partnership firm to manufacture low cost jute bags as plastic bags were creating many environmental problems. They contributed capitals of Rs. 1,00,000 and Rs. 50,000 on 1st April, 2014 for this. Singh expressed his willingness to admit Shakti as a partner without capital, who is specially abled but a very creative and intelligent friend of his. Gupta agreed to _____ this.

The terms of partnership were as follows:-

- (a) Singh, Gupta and Shakti will share profits in the ratio of 2:2:1
- (b) Interest on capital will be provided @ 6% per annum.

Due to shortage of capital, Singh contributed Rs. 25,000 on 30th September, 2014 and Gupta contributed Rs. 10,000 on 1st January, 2015 as additional capital. The profit of the firm for the year ended 31st March, 2015 was Rs. 1,68,900.

Prepare profit and loss appropriation account for the year ending 31st March, 2015.

2. L, M and N were partners in a firm sharing profits in the ratio of 3:4:5. Their fixed capitals were Rs. 4,00,000, Rs. 5,00,000 and Rs 6,00,000 respectively.

The partnership deed provided for the following

- (a) Interest on capital @ 6% per annum.
- (b) Salary of Rs.30,000 per annum to N.
- (c) Interest on partners' drawings will be charged @ 12% per annum.

During the year ended 31st March, 2015, the firm earned a profit of Rs. 2,70,000. L withdrew Rs. 10,000 on 1st April, 2014, M withdrew Rs. 12,000 on 30th September, 2014 and N withdrew Rs. 15,000 on 31st December, 2014. Prepare profit and loss appropriation account for the year ended 31st March, 2015.

3. Soumya and Bimal are partners in a firm sharing profits and losses in the ratio of 3:2. The balances in their capital and current accounts as on 1st April, 2014 were as under:-

Items	Soumya (Rs.)	Bimal (Rs.)
Capital accounts	3,00,000	2,00,000
Current accounts (Cr)	1,00,000	80,000

The partnership deed provides that Soumya is to be paid salary @ Rs. 500 per month whereas, Bimal is to get a commission of Rs. 40,000 for the year. Interest on capital is to be credited at 6% per annum. The drawings of Soumya and Bimal for the year were Rs. 30,000 and Rs. 10,000, respectively. The net profit of the firm before making these adjustments was Rs. 2,49,000. Interest on Soumya's drawings was Rs. 750 and Bimal's drawings was Rs. 250. Prepare profit and loss appropriation account and partners' capital and current accounts.

4. A, B and C were partners in a firm. On 1st April, 2013, their fixed capitals stood at Rs. 50,000, Rs. 25,000 and Rs. 25,000 respectively.

As per the provisions of the partnership deed

- (a) A was entitled to a salary of Rs. 5,000 per annum.
- (b) All the partners were entitled to interest on capital at 5% per annum.

- (c) Profits were to be shared in the ratio of capitals.

The net profits for the year ending 31st March, 2014 of Rs. 33,000 and 31st March, 2015 of Rs. 45,000 were divided equally without providing for the above terms. Pass an adjustment journal entry to rectify the above error.

5. X, Y and Z were partners in a firm sharing profits in the ratio of 1:2:2. After division of the profits for the year ended 31st March, 2015, their capitals were: X Rs. 1,50,000, Y Rs. 1,80,000 and Z Rs. 2,10,000. During the year, they withdrew Rs. 20,000 each. The profit for the year was Rs. 60,000. The partnership deed provided that the interest on capital will be allowed @ 10% per annum. While preparing final accounts, interest on partners' capitals was not allowed. You are required to calculate capital of X, Y and Z as at 1st April, 2014 and pass necessary adjustment entry for providing interest on capital. Show your working clearly.
6. Ahmad, Bheem and Daniel are partners in a firm. On 1st April, 2014, the balance in their capital accounts stood at Rs. 8,00,000, Rs. 6,00,000 and Rs. 4,00,000 respectively. They shared profits in the proportion of 5 : 3 : 2 respectively. Partners are entitled to interest on capital @ 5% per annum and salary to Bheem @ Rs. 3,000 per month and a commission of Rs. 12,000 to Daniel as per the provisions of the partnership deed. Ahmad's share of profit, excluding interest on capital, is guaranteed at not less than Rs. 25,000 per annum. Bheem's share of profit, including interest on capital but excluding salary, is guaranteed at not less than Rs. 55,000 per annum. Any deficiency arising on that account shall be met by

Daniel. The profits of the firm for the year ended 31st March, 2015 amounted to Rs. 2,16,000. Prepare profit and loss appropriation account for the year ended 31st March, 2015 and partners capital accounts too.

7. A, B and C are in partnership with capital of 2,40,000 (Credit), Rs. 2,00,000 (Credit) and Rs. 16,000 (Debit) respectively on 1st April, 2014. Their partnership deed provides for the following:-

- (a) 7.5% of net profit to be transferred to general reserve.
- (b) Partners are to be only allowed interest on capital @ 5% per annum and are to be charged interest on drawings @ 6% per annum.
- (c) C is entitled to a salary of Rs. 14,000.
- (d) A is entitled to a remuneration of 10% of the net profit before making any appropriation.
- (e) B is also entitled to a commission of 8% of the net profit before charging interest on drawings but after making all appropriations.

During the year, A withdrew Rs. 2,000 at the beginning of every month, B Rs. 2,000 during the middle of the month and C Rs. 2,000 at the end of every month. on 1st October, 2014, C granted a loan of Rs. 12,00,000. The manager is entitled to a salary of Rs. 2,000 per month and a commission of 10% of net profits after charging his salary and commission.

The net profit of the firm for the year ended on 31st March, 2014 before providing for any of the above adjustments was Rs. 3,24,000.

Prepare profit and loss appropriation account for the year ended on 31st March, 2015.

8. Ram and Rahim are partners in a firm sharing profit and losses in the ratio of 3 : 2. They employ John as their manager to whom they paid a salary of Rs 900 per month. John had advanced Rs. 24,000 as loan to firm on which interest was payable at the rate of 9% p.a. At the end of the year 2015 (after division profit) it was decided that John would be treated as a partner with effect from Jan. 1st 2012 with 1/6th share of profit, his deposits being considered as capital carrying interest at 6% p.a., like other partners. The firm's profit and losses after allowing interest on capital was as follows:-

	Rs.		Rs.
2012	70,800 (Profit)	2014	4800 (Loss)
2013	74,400 (Profit)	2015	93600 (Profit)

Record the necessary journal entries to give effect to the above.

9. Distinguish between fixed and fluctuating capital accounts.
10. Why is Profit & Loss Appropriation Account prepared by a firm?
11. What is Partnership Deed? What are its contents?
12. What is Goodwill? How its value determined?
13. What is Reconstitution of Partnership?
14. Explain briefly any two occasions on which a partnership firm is reconstituted.
15. Distinguish between Gaining ratio and Sacrificing Ratio.

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ECONOMICS

1. State two features of resources that give rise to an economic problem.
2. Define Opportunity Cost.
3. Define the production Possibilities Curve with graph.
4. Explain the central problem of “What to Produce” with the help of examples.
5. Explain the central problem of “How to produce” with examples.
6. Explain the following:
 - a) Why is PPC downward sloping?
 - b) PPC is concave to origin?
7. Define marginal utility.
8. Define consumer's equilibrium.
9. What is budget line?
10. Explain the following:
 - a) Why is an indifference curve convex to the origin?
 - b) Why does a higher indifference curve represent a higher level of satisfaction?
11. Distinguish between Intermediate goods and final goods?
12. Distinguish between stock and flow?
13. Distinguish between Real Income and Nominal Income?
14. Explain two limitations of GDP?
15. “All capital goods are producer goods but all producer Goods are not capital goods “Explain.
16. Distinguish between National Income and personal disposable Income.
17. Solve 5 numericals based on :
 - a) Private Income
 - b) Personal Income

- c) Personal Disposable Income
- d) National Disposable Income

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BUSINESS STUDIES

1. Michael is working as Corporate Development Head in Adam Ltd. Name the managerial level at which he is working. State four functions which he will perform as a CDH in this company. [1+(1/2+1/2+1/2+1/2)]
2. Identify and explain the principle violated in the following picture cases. Also explain the negative effects of violating each principle. [3]

(i)



(ii)



3. It is the process, by which government control over the industry is being loosened. Identify the term and discuss it briefly [3]
4. Mc Donald company does not give its franchise to other company. Which type of plan is it? Discuss. [3]
5. You have three brothers. They are working in three different MNCs as General Manager, Supervisor and Deputy Personnel Manager.

What functions of management do you think they are performing in their companies? Are they performing the same functions of management? If yes, why? [4]

6. There is a growing competition in the market of electronics, due to technological advancement and ever increasing demand of households. As a result, ABC Ltd is facing the problem of decline in market share. In order to combat competition, the company plans to introduce new models with added features and technological advancements.

a) How will you seek to remove the problem of ABC Ltd?

b) Identify the missing values in the above case. [4]

7. The court issued the order that for vehicles to be smokeless was most essential and that any one violating this order shall have to pay a heavy fine. Abiding by this order was necessary for the health of people. Making this strict order of the court as the base, 'Gyan Motors Ltd' resolved to manufacture such vehicles by using modern technology as should not produce any smoke at all. The government also announced to provide help in several ways to set up such industrial units.

a) Identify the three dimensions of business environment described in the paragraph above by quoting the relevant lines.

b) Write about any one of the values for society granted by the court. [4]

8. Mrs Renu Natrajan, the Principal of Prince Public School appointed Mr Sansar Chand as the coach for football team which was to play the final match in the State Level Tournament. During training, the coach inspired the players to make up their mind to win the match in all circumstances. Also he stressed that they had to win the match with the difference of at least five goals from the losing team. He explained special methods to the players for playing both offensive and defensive game. Also he told them how after beating the opponents, football would be passed from one player to the other until it reached the goal box of the opposite team. At the end of the training, the coach warned all the players against misbehaving with any of the players of the opposite team, otherwise, they could be punished.

a) Identify the concept of planning function of management described in the paragraph given above.

b) Explain the four types of concepts identified in point 'a' by quoting the relevant lines. [5]

9. Discuss the difference between the contribution of Fayol and Taylor. [5]
10. What is a Budget? Give an example of Sales Budget. [6]

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ENGLISH

WRITING

1. Design a poster on “No Smoking’ in not more than 50 words. [4]

OR

Situation vacant: B &B Associates requires a customer care executive for their office in Shahdara, Delhi. Write an advertisement for the column Situation Vacant of a local daily.

2. You are the Sports Secretary of Jagjivan Memorial School, Patparganj, Delhi. You need a few items for the Annual Sports Meet to be held in your school. Write a letter to Vats Sports Company placing orders for the items. [6]

LITERATURE

1. The bangle makers of Firozabad make beautiful bangles and make everyone happy, but, they live and die in squalor. Elaborate. (80- 100 words) [4]
2. What message does the poet Stephen Spender convey through the poem ‘An Elementary School Classroom in a slum’? [3]
3. Give a brief character of Dr. Griffin.(125- 200 words) [4]
4. Mankind can either use / misuse science for their vested interests. Elucidate with reference to the novel, The Invisible Man in 125- 200 words. [4]

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ENTREPRENEURSHIP

1. What is a business opportunity? What factors are involved in the process of sensing an entrepreneurial opportunity?
2. Randhir a young entrepreneur is often found in the marketplace. He enjoys seeing what are people eating, doing, wearing and using. Further he visits Trade shows not to buy but to see what’s hot. Identify Randhir’s method of spotting trend.
3. What is Idea generation?
4. Explain the investment decision under the financial plan? In which areas should the investment should be on the basis of priority?
5. Define the term environment scanning. Explain SWOT matrix in this reference.
6. What is idea field? Specify the source in following cases:-

- a) Use of clay as soil and for ceramics.
- b) Indianised version of American food
7. What is PESTEL model? Explain it with reference to privatisation in steel manufacturing sector.
8. Draw the enterprise process diagram.
9. Explain in detail Idea Fields.
10. Explain, in detail, the various formalities required to start a business.
11. What is a business plan? Explain its importance.
12. What is a marketing plan? Why is it required in business enterprises?

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MATHEMATICS

1.1 Function

1. Find $f(x)$, if $f(x + 7) = x^2 - 3x + 2$
2. Is the function $f(x) = [|Sinx| + |Cosx|]$ is invertible.
3. Find the domain of definition of the function $f(x)$ is given by the equation $2^x + 2^y = 2$.
4. The Range of $f(x) = 3Sin(\sqrt{\frac{\pi^2 - 16x^2}{16}})$
5. $y = \log_e(3x^2 - 4x + 5)$, Find the Range of the function.
6. The range of the function $f(x) = [\sin^{-1} x]$ Where $[.]$ is Greatest Integer.
7. Find the period of the functions
 - (a) $f(x) = |Sin^4 x| + |Cos^4 x|$
 - (b) $f(x) = Cosx + \{x\}$
 - (c) $f(x) = 2Cos(\frac{x - \pi}{3})$
 - (d) $Cos\sqrt{x}$
8. Calculate $f(x) = \frac{49}{x^4} + x^4$, at the points for which $\frac{7}{x} + x = 3$
9. If $f(x) = [\sin^{-1} x + \cos^{-1} x]$, Find the Range of $f(x)$.
10. If $f: R \rightarrow R$, is defined by $f(x) = (3 - x^3)^{\frac{1}{3}}$ find $f(f(x))$
11. Find the range of $f(x) = 2^x + 2^{-x} + 5$.
12. Let $f(x + y) = f(x).f(y)$ for all x and y . Suppose $f(5) = 2, f'(0) = 3$. then find $f'(5)$.
13. Let the function $f: R \rightarrow R$ be defined by $f(x) = 2^{x(x-1)} \forall x \in R$, then write f^{-1} . (assume bijection)

14. If $f: [1, \infty) \rightarrow [2, \infty)$ is given by $f(x) = x + \frac{1}{x}$, then find $f^{-1}(x)$ (assume bijection)
15. Find the inverse of the function, (assuming onto)
 $y = \log_a(x + \sqrt{x^2 + 1})$, ($a > 1$)
16. Let $f(x) = ax^7 + bx^3 + cx - 5$ where a, b, c are constants. If $f(-7) = 7$, then find $f(7)$
17. If $A = \{a, b, c, d\}$ and $f = \{(a, b), (b, d), (c, a), (d, c)\}$, show that f is one one from A onto A . Find f^{-1}
18. The domain of the function $f(x) = \frac{\sin^{-1}(x-3)}{\sqrt{9-x^2}}$
19. Find the domain of the function $f(x) = \frac{1}{\sqrt{|x|-x}}$
20. If the set A has 3 elements and the set $B = \{3, 4, 5\}$, then find the number of elements in $(A \times B)$
21. If $\left(\frac{2x}{3} + 1, 3y - \frac{2}{3}\right) = \left(\frac{5}{3}, \frac{1}{3}\right)$, Find the values of x, y
22. Write the number of all one one function from the set $A = \{a, b, c, d\}$ to itself.
23. Find the domain and Range of function $f(x) = \frac{x^2}{1+x^2}$
24. If $f = \{(4, 2), (6, 7)\}$ and $g = \{(4, 2), (7, 5)\}$ Write range of g and f .
25. If $A = \{1, 2, 3\}$ and f and g are relations corresponding to the subject of $A \times A$ indicated against them, which of f, g is a function? Why?
26. Let the function $f: R \rightarrow R$ be defined by $f(x) = 4x - 1, \forall x \in R$, then Show that f is One –One.
27. If $f(0) = 1, f(1) = 2$ and $f(x) = \frac{1}{2}[f(x+1) + f(x+2)]$, then find the value of $f(5)$.
28. Classify which of the following functions as many one, one one, onto or into functions.
- $f(x) = e^x + e^{-x}$
 - $f(x) = x^3$
 - $f(x) = \sqrt{1-x^2}$
 - $f(x) = \sin 2x, f: [-1, 1] \rightarrow [-1, 1]$
29. Let $E = \{1, 2, 3, 4\}$ and $F = \{1, 2\}$. Then find the number of onto functions from E to F .

30. If $(x) = x^2 + bx + 3$, is not injective for values of x in the interval $0 \leq x \leq 1$. Find the interval in which b lies.
31. If $f(x) = x + \frac{1}{x}$, then find the value of $f(f(f(x)))$
32. If $f(x)$ be a polynomial function satisfying $f(x).f\left(\frac{1}{x}\right) = f(x) + f\left(\frac{1}{x}\right)$ and $f(4) = 65$. then find the value of $f(6)$
33. Let $(x) = ax^7 + bx^3 + cx - 5$, where a, b, c are constants . If $f(-7) = 7$, then find then value of $f(7)$
34. For $x \in R$, the function $f(x)$ satisfies $2f(x) + f(1 - x) = x^2$. Then find the value of $f(4)$.
35. If $f(x) + 2f(1 - x) = x^2 + 2$, $\forall x \in R$, Find $f(x)$.

1.2 Relation

1. If R is a relation from a finite set A having m elements to a finite set B having n elements , then find the number of relations from A to B .
2. Let $A = \{0,1,2,3\}$ and define a relation R on A as follows :
 $R = \{(0,0), (0,1), (0,3), (1,1), (2,2), (3,0), (3,3)\}$
3. For a set $A = \{1,2,3\}$, defined on a relation R in a set A as follows : $R = \{(1,1), (2,2), (3,3), 1,3)\}$
4. Let R be the equivalence relation in the set Z of integer given by $R = \{(a, b): 2 \text{ divides } a - b\}$ Write the equivalence class $[0]$

1.3 Binary Operation

1. Let $*$: $R \times R \rightarrow R$ be a binary operation given by $a * b = a + 4b^2$, then compute $(-5) * (2 * 0)$.
2. Is binary operation $*$ defined on Z (set of Integer) by $m * n = m - n + mn \forall m, n \in Z$ commutative ?
3. Find the total number of binary operations possible with the set $A = \{1,8,7,4,3,2\}$
4. In the set N of natural numbers , defined the binary operation $*$ by $m * n = \text{gcd}(m, n)$, $m, n \in N$. Is operation $*$ commutative and Associative ?
5. If $*$ is a binary operation given by $*$: $R \times R \rightarrow R$, $a * b = a + b^2$, then find the value of $-2 * 5$ is
6. Let $A = \{1,2,3,4,5\}$ defined as operation $*$ by $a * b = \max \{ a, b \}$, Construct binary table.

1.4 Inverse Trigonometric Function

1. Find the value of $\sin^{-1} \sin \frac{3\pi}{5}$
2. Find the principal value of $\cos^{-1} x$, for $x = \frac{\sqrt{3}}{2}$
3. Evaluate (a) $\tan^{-1}(\tan^{-1}(-4))$ (b) $\tan^{-1}\left(\sin\left(-\frac{\pi}{2}\right)\right)$
4. Evaluate (a) $\tan^{-1}\left(\tan \frac{9\pi}{8}\right)$ (b) $\sin^{-1}\left[\cos\left(\sin^{-1} \frac{\sqrt{3}}{2}\right)\right]$
5. Prove that $\tan(\cot^{-1} x) = (\cot(\tan^{-1} x))$ State with reason whether the equality is valid for all values of x .
6. Find the values of $\sec\left(\tan^{-1}\left(\frac{y}{x}\right)\right)$
7. Find the value of $\tan(\cos^{-1} x)$ and hence evaluate $\tan\left(\cos^{-1} \frac{8}{17}\right)$
8. Find the value of $\sin\left[2 \cot^{-1}\left(\frac{-5}{12}\right)\right]$
9. Evaluate $\cos\left[\sin^{-1} \frac{1}{4} + \sec^{-1} \frac{4}{3}\right]$
10. If $\sin^{-1} x + \sin^{-1} y = \frac{\pi}{2}$, then find the value of $\cos^{-1} x + \cos^{-1} y = ?$
11. Let a , b , c be positive real numbers. Let $\theta = \tan^{-1} \sqrt{\frac{a(a+b+c)}{bc}} + \tan^{-1} \sqrt{\frac{b(a+b+c)}{ca}} + \tan^{-1} \sqrt{\frac{c(a+b+c)}{ab}}$, then $\tan \theta = ?$
12. The value of $\tan\left[\cos^{-1} \frac{4}{5} + \tan^{-1} \frac{2}{3}\right]$
13. Find the number of real solution $\tan^{-1} \sqrt{x(x+1)} + \sin^{-1}(\sqrt{x^2+x+1}) = \frac{\pi}{2}$
14. Find the principal value of $\sin^{-1}\left(\sin \frac{2\pi}{3}\right)$
15. Show that $\sin^{-1} \frac{12}{13} + \cos^{-1} \frac{4}{5} + \tan^{-1} \frac{63}{16} = \pi$
16. Prove that $\cos \tan^{-1} \sin \cot^{-1} x = \sqrt{\frac{x^2+1}{x^2+2}}$
17. Find the value of x for which $\sin(\cot^{-1}(1+x)) = \cos \tan^{-1} x$
18. If $\sin^{-1} : [-1,1] \rightarrow \left[\frac{\pi}{2}, \frac{3\pi}{2}\right]$ is a function, then find the value of $\sin^{-1}\left(-\frac{1}{2}\right)$ is
19. Evaluate $\sin^{-1}\left\{\sin \frac{8\pi}{5}\right\}$
20. $\sin^{-1}(1-x) - 2 \sin^{-1} x = \frac{\pi}{2}$, then find the value of x
21. Prove that $\frac{9\pi}{8} - \frac{9}{4} \sin^{-1} \frac{1}{3} = \frac{9}{4} \sin^{-1} \frac{2\sqrt{2}}{3}$
22. Evaluate $x + y + z$, $\sin^{-1} x + \sin^{-1} y + \sin^{-1} z = \frac{3\pi}{2}$
23. Evaluate $x + y + z$, $\cos^{-1} x + \cos^{-1} y + \cos^{-1} z = 0$
24. Find the principal value of $\sin^{-1}\left[\cos\left(\sin^{-1} \frac{1}{2}\right)\right]$

25. The value of $\tan^{-1} \left(\tan \frac{2\pi}{3} \right)$
26. Draw the graph of
- $f(x) = \sin^{-1} x$, $f(x) = \cos^{-1} x$
 - $f(x) = \tan^{-1} x$, $f(x) = \sec^{-1} x$
 - $f(x) = \csc^{-1} x$, $f(x) = \cot^{-1} x$
 - $f(x) = \sin^{-1} \sin x$, $f(x) = \sin \sin^{-1} x$

1.5 Continuity and Differentiability

1. Check the Continuity and Differentiability of function

$$y = |x| + |x + 1|$$

2. Check the Continuity and Differentiability of function

$$y = [x] + |x| , -2 \leq x \leq 2$$

3. Check the Continuity and Differentiability of function

$$f(x) = \begin{cases} -2x + 1, & x < 0 \\ x + 4, & x \geq 0 \end{cases}, -1 \leq x \leq 2$$

4. Draw the graph of the function $y = |x| + |x + 1| + |x - 1|$

5. Draw the graph of the function $f(x) = \frac{x^2 - 4}{x - 2}$

6. Find the values of a and b so that $f(x) = \begin{cases} ax + b & \text{if } x < 0 \\ 2\sin x + 3\cos x & \text{if } x \geq 0 \end{cases}$

7. Find the number c that makes $f(x) = \begin{cases} \frac{x-c}{c+1} & \text{if } x \leq 0 \\ x^2 + c & \text{if } x > 0 \end{cases}$

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PHYSICAL EDUCATION

- Define Planning in Sports and write down its meaning?
- What do you mean by "BYE"?
- What do you mean by "Seeding" in a Tournament?
- What do you mean by the word "Tournament" and what are different types of Tournament?
- Define Fixture and define method of preparing Fixture?
- Draw a Knock-Out fixture for 13 teams and explain in detail the procedure?
- Draw a Knock-Out fixture for 12 teams and explain in detail the procedure?

8. Draw a League fixture for 9 teams using cyclic method and explain in detail the procedure?
9. What is a Balanced Diet?
10. What do you understand by Nutritive and Non Nutritive components of diet?
11. What do you understand by Food Myths? Explain in detail?
12. Define YOGA and explain its elements in detail?
13. What is the importance of Yoga in games and sports?

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INFORMATICS PRACTICES

1. Mr. Ashish works as a programmer in “Universal Technologies Pvt. Ltd.”. He has designed a Library software to generate the member ship fee depending upon the membership type considering discount eligibility as well. A screenshot of the same is shown below:

The screenshot shows a web-based form for a library membership fee calculator. The title is "Reader's Paradise Library". The form includes the following fields and controls:

- Member Name:** Text input field containing "Syueon Lee".
- Age:** Text input field containing "17".
- Membership Type:** Radio buttons for "Monthly", "Quaterly" (selected), and "Yearly".
- Check Fee:** A blue button.
- Fee:** Text input field containing "1000".
- Discount Eligibility:** Radio buttons for "Students" (selected) and "Other".
- Check Discount:** A blue button.
- Discount:** Text input field containing "200".
- Calculate:** A blue button.
- Net Fee:** Text input field containing "800".
- Clear All:** A blue button.

Help him in writing the code to do the following:

- a) After selecting appropriate Radio Button, when 'Check Fee' button is clicked, fee should be displayed in the respective text field according to the following criteria:

Membership Type	Fee
Monthly	500
Quarterly	1000
Yearly	1500

- b) After selecting appropriate Radio Button, when 'Check Discount' button is clicked, appropriate discount should be displayed in the respective text field according to the following criteria:

Discount Eligibility	Discount
Students	200
Other	100

- c) When 'Calculate' button is clicked, Net Fee should be calculated and displayed in the respective text field as per the given formula:

$$\text{Net Fee} = \text{Fee} - \text{Discount}$$

- d) When 'Clear All' button is clicked, all the text fields should be cleared.

2. Ms. Sharma works as a programmer in "ABC Car Rental Company" where she has designed a software to compute charges to be paid by the client. A client can take any car out of Deluxe/ Semi Deluxe/ Ordinary for rent. A client can also opt for services of a guide. Charges vary depending on the type of car opted. Charges of services of Guide are extra.

Help Ms. Sharma in writing the code to do the following:

- a) After selecting appropriate Radio Button and checkbox (if required), when 'CALCULATE' button is clicked, Amount, Guide Charges and Total Amount should be calculated and displayed in the respective text fields

Category of Car	Amount (in Rs.)
Deluxe Car	1000 per day
Semi Deluxe Car	800 per day
Ordinary Car	700 per day

Amount is obtained by multiplying per day charges of Car with number of days for which the car is taken. If 'Guide Required' checkbox is selected, Guide charges per day are Rs.500.00. Guide Charges is calculated as:

Car required for No. of days * 500; Total Amount = Amount + Guide Charges

3. Design a form to get the details of a student and store it in **student** table. (Use JAVA-MySQL connectivity).
4. Design a form to find the volume of cube, cuboid and cylinder.
5. Write SQL query to create a table 'Song' with the following structure:

Field	Type	Constraint
Songid	Integer	Primary key
Title	Varchar(50)	
Duration	Integer	
ReleaseDate	Date	

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