# SARALA BIRLA PUBLIC SCHOOL 

Mahilong, Ranchi

## Class : XI

## Assignment - 1 (2024-25)

## COMMERCE

## ENGLISH (301)

1. Story of my life:

Prepare one video on the journey of your life. Use your pictures from your childhood till teenage. You can include your achievements and best of your memories. Add a voice over in the video describing every photo. Maximum length of video should be 1 minute.
2. Tracing the roots:

Prepare a PPT tracing your family's ancestry and take a trip down the memory lane. Talk to your grandparents and find out about their roots and whereabouts. After returning from the vacation, a live presentation has to be done in the classroom.

## ACCOUNTANCY (055)

1. A concept that a business enterprise will not be sold or liquidated in the near future is known as $\qquad$ .
(a) Going concern
(b) Economic entity
(c) Monetary unit
(d) None of the above
2. Assertion (A): Capital expenditure is incurred for the purpose of increasing the earning capacity of the business.
Reason $(R)$ : Revenue expenditure is incurred for maintenance of earning capacity.
(a) Both $(A)$ and $(R)$ are true and $(R)$ is the correct explanation of $(A)$
(b) Both $(A)$ and $(R)$ are true but $(R)$ is not the correct explanation of $(A)$
(c) (A) is true, but (R) is false.
(d) (A) is false, but ( $R$ ) is true.
3. Omission of paise and rounding of figures is based on which accounting convention?
(a) Full Disclosure
(b) Conservatism
(c) Consistency
(d) Materiality
4. The assets which are convertible into cash or cash equivalents within a year are known as $\qquad$ .
(a) Fixed assets
(b) Current assets
(c) Tangible assets
(d) None of the above
5. According to the Convention of Conservatism, closing stock is valued at?
(a) At cost price
(b) Cost Price or realizable whichever is less
(c) At realizable value
(d) None of the above
6. Give an example of a transaction which will result in:
i. Increase in Asset and increase in liability
ii. Decrease in asset and decrease in liability
iii. Increase in asset and increase in owner's capital
7. On $31^{\text {st }}$ March, 2023, the total assets and external liabilities were 2,00,000 and 6,000 respectively. During the year, the proprietor had introduced capital of 20,000 and withdrawn 12,000 for personal use. He made a profit of 20,000 during the year. Calculate the capital as on $1^{\text {st }}$ April, 2022.
8. Explain in detail and give examples:
(a) Assets
(b) Convention of Conservatism
(c) Non - Current Liabilities
9. Shyam purchased a building for 20 lakh. After a period of five years, the depreciation charged on the building amounted to ₹ 3 lakh. However, due to boom in the property market, the current market value of the building is 28 lakh. Identify and explain the value at which building should be recorded in the books of accounts. Also, give reasons for the same.
10. Prove that the Accounting Equation is satisfied in all the following transactions of Suresh.
(a) Commenced business with cash ₹ 60,000 and cheque ₹ 20,000 .
(b) Paid rent in advance ₹ 5000.
(c) Purchased goods for cash ₹ 30,000 and credit ₹ 20,000 .
(d) Sold goods for cash ₹ 30,000 costing ₹ 20,000.
(e) Paid salary ₹ 1500 and salary outstanding being ₹ 1000.
(f) Bought motorcycle for personal use ₹ 5,000.

## BUSINESS STUDIES (054)

1. According to you which is best form of business organization. Give reason to justify your answer.
2. Take live example of partnership firm from your society. Discuss the merit and demerits of partnership firm.
3. Various types of companies can be formed. Throw light on this statement and explain any two companies.
4. Why do companies go for social responsibilities. Take reference from your society and discuss any such case.
5. Justify the statement Banking and Financial Institutions overcome the Hindrance of finance. Mention any four points.

## ECONOMICS (30)

1. A factory is working with 20 workers. Each worker can produce 5 units per day. On Tuesday, 5 workers remain absent. The factory also has 10 machines and each machine requires 2 workers to operate.
A. What will be the possible production?
B. Is there exist underutilisation of resources? If yes show it with the help of PPC .
C. What steps may be taken in this scenario?
D. If the production manager, plans to increase the production capacity by $10 \%$, without having the knowledge of the present scenario, what can be the PPC in this situation?
E. The personnel manager of the factory gives a proposal to start a cheap canteen, where the workers can get healthy diet at a subsidised rate.
Do this proposal create any impact on PPC? Explain it with the help of PPC.
2. Identify any four features of statistics on the basis of the above graph.
I. Explain the meaning of statistics; Singular and Plural sense separately on the basis of the statistical data shown above.
II. Mention atleast one function of the above graph from the view point of - (a) Spectators \& (b) Coach.
3. Champa likes to eat samossas. Sheconsumes 3 to 4 samossasin her school canteen to satisfy her hunger. The samossas priced Rs 10 only in the school canteen.

But she do not prefer to consume more than 1 samossa when she go to airport, although the quality and taste of samossa is almost similar to her school canteen. The price of samossain airport is Rs 90 each.

Why do you think Champa's consumption behaviour changes with the location?
Explain the situation with the help of Consumer equilibrium in case of one commodity, through cardinal utility approach.

## ENTREPRENEURSHIP (066)

1. Explain the case study of Mansukhbhai Prajapati's Mitticool refrigerator.
2. Explain the concept of Entrepreneurship.
3. Give advantages and disadvantages of being an entrepreneur.
4. Explain the following Promotional Functions:
a. Investigation of an idea
b. Detailed investigation
c. Financing the proposition
5. Make a PPT profile for an upcoming start-up company as a CEO. Explain his entrepreneurial functions and managerial functions.
6. Take a product of your choice and prepare a pitch for the same.

STANDARD MATHEMATICS (041)

1. Find the value of
(a) $\operatorname{Sin}(31 \pi / 3)$
(b) $\operatorname{Cos}\left(-2220^{\circ}\right)$
(c) $\operatorname{Cosec}(-41 \pi / 4)$
2. Find the value of $\frac{\operatorname{Cos} 10^{\circ}+\operatorname{Sin} 10^{\circ}}{\operatorname{Cos} 10^{\circ}-\operatorname{Sin} 10^{\circ}} \quad \& \quad \frac{\operatorname{Cos} 15^{\circ}+\operatorname{Sin} 15^{\circ}}{\operatorname{Cos} 15^{\circ}-\operatorname{Sin} 15^{\circ}}$
3. Prove that $\frac{\operatorname{Cos}(\pi+x) \operatorname{Cos}(-x)}{\operatorname{Cos}(\pi-x) \operatorname{Cos}\left(\frac{\pi}{2}+x\right)}=-\operatorname{Cot} x$
4. Prove that $\tan \left(\frac{\pi}{4}+x\right)=\frac{1+\tan x}{1-\tan x}$
5. Prove that $2 \operatorname{Sin}(5 \pi / 12) \operatorname{Sin}(\pi / 12)=1 / 2$
6. Prove that $\operatorname{Sin} 10^{\circ} \operatorname{Sin} 50^{\circ} \operatorname{Sin} 60^{\circ} \operatorname{Sin} 70^{\circ}=\sqrt{ } 3 / 16$
7. Prove that $\operatorname{Cos} x \operatorname{Cos} 2 x \operatorname{Cos} 4 x \operatorname{Cos} 8 x=\frac{\operatorname{Sin} 16 x}{16 \operatorname{Sin} x}$
8. Prove that $\frac{\operatorname{Sin} 2 x}{1-\operatorname{Cos} 2 x}=\operatorname{Cot} x$
(ii) $\frac{(1-\operatorname{Cos} x)}{1+\operatorname{Cos} x}=\tan ^{2} \frac{x}{2}$
9. $\operatorname{Cot} x \operatorname{Cot} 2 x-\operatorname{Cot} 2 x \operatorname{Cot} 3 x-\operatorname{Cot} 3 x \operatorname{Cot} x=1$
10. Prove that $\quad \tan 6^{\circ} \tan 42^{\circ} \tan 66^{\circ} \tan 78^{\circ}=1$
11. Prove that $\quad \operatorname{Sin}^{2} 24^{\circ}-\operatorname{Sin}^{2} 6^{\circ}=(\sqrt{5}-1) / 8$
12. If $x \operatorname{Cos} \theta=y \operatorname{Cos}(\theta+2 \pi / 3)=z \operatorname{Cos}(\theta+4 \pi / 3)$, then find the value of $x y+y z+z x$ ?
13. Prove that: $\operatorname{Cos} 6 x=32 \operatorname{Cos}^{6} x-48 \operatorname{Cos}^{4} x+18 \operatorname{Cos}^{2} x-1$
14. Find the value of $\tan 9^{\circ}-\tan 27^{\circ}-\tan 63^{\circ}+\tan 81^{\circ}$.
15. If the arcs of the same lengths in two circles subtend angles $65^{\circ}$ and $110^{\circ}$ at the centre, find the ratio of their radii.

## Make a schematic diagram showing the definition of trigonometric functions.

Also, state all the formulas with diagram related to trigonometry.

## APPLIED MATHEMATICS (241)

1. Define Exponential form and Write all formulae of indices (at least 8 formulae).
2. Simplify:
a. $\frac{3 x^{4} y^{3}}{18 x^{3} y^{5}}$
b. $\frac{5^{\mathrm{n}+2}-6 X 5^{\mathrm{n}+1}}{13 X 5^{n}-2 X 5^{n+1}}$
c. $\left(\frac{x^{m}}{x^{n}}\right)^{m+n} \times\left(\frac{x^{n}}{x^{l}}\right)^{n+l} \times\left(\frac{x^{l}}{x^{m}}\right)^{l+m}$
3. If $\mathrm{a}=b^{2 x}, \mathrm{~b}=c^{2 y}$ and $\mathrm{c}=a^{2 z}$. Prove that $\mathrm{xyz}=\frac{1}{8}$.
4. If $X^{4} Y^{2} Z^{3}=49392$, find the values of $X, Y$ and $Z$, where $X, Y$ and $Z$ are different positive primes.
5. If $a^{x}=b^{y}=c^{z}$ and $\mathrm{b}^{2}=\mathrm{ac}$. Prove that $\mathrm{y}=\frac{2 x z}{z+x}$.
6. If $2^{x}=3^{y}=6^{z}$, Prove that $\frac{1}{x}+\frac{1}{y}+\frac{1}{z}=0$.
7. Define Natural logarithms and Common logarithms.
8. What is Characteristic and Mantissa.
9. Find $x: \log 3 x=\log 2+\log (x+4)$
10. Find $x: \log (3+x)-\log (x-4)=\log 4$
11. If $a^{2}=\log _{10} X, b^{3}=\log _{10} Y$ and $\frac{a^{2}}{2}-\frac{b^{3}}{3}=\log _{10} Z$, express $Z$ in terms of $X$ and $Y$.
12. Solve for $X: \log X+\log 5=2 \log 3$
13. Given that $\log _{a} X=\frac{1}{A}, \log _{b} Y=\frac{1}{B}, \log _{c} Z=\frac{1}{C}$, find $\log _{a b c} X$.
14. If $\log \frac{(x-y)}{2}=\frac{1}{2}(\log x+\log y)$, prove that $x^{2}+y^{2}=6 x y$.
15. AIL: Paste the paper quilling samples on a chart paper of the following: $2^{8}, 8^{2}, 3^{3}, 5^{4}$

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