Delhi Public School Aligarh
Holiday Home Work
SESSION 2019-20
CLASS XII

English

Q1. Write an article in 150-200 words on the following topics in writing skills notebook:
- Justice delayed is justice denied
- Addiction to Whatsapp ,Facebook and other social sites
- Media Biasing – Controlled by ruling party
- India -not mature enough for effective coalition governments
- Atrocities on women

ACCOUNTANCY

Project File (Comprehensive Project

Formation of Journal entry, Ledger Account, Trail balance and financial statement.

Business Studies
NOTE: All the questions to be solved on class work note book only

1. Fayol points out the danger and cost of unnecessary labour turnover in one of his 'Principles'. Name and explain the principle.

2. Write one violating effect each of the 14 Principles of management given by Henry Fayol.

3. One of the principles of scientific management emphasizes to make the employee efficient, by training the workers. It further insists that each employee must be scientifically selected and work assigned to employees should suit their physical, mental and intellectual capabilities.

    (i). Name and explain the Principle of scientific management involved in above case.

    (ii). Name the value emphasized by this principle.

4. After winning the election, Prime Minister Mr. Modi launched a campaign of 'Swachh Bharat' and involved various celebrities to be a part of this Abhiyaan. This spread awareness among the people in society and in general, people started becoming more careful and aware about the cleanliness around their area. To continue its impact, a new service tax for Swachh Bharat   was also started. The government is planning to import new and better technology to adopt new methods of treating the garbage and waste.

    State the various dimensions of business environment mentioning in the above para and quoting the lines from the above para.

5. Nikita and Salman completed their MBA and started working in a MNC at the same level. Both are working hard and are happy with their employees. Salman have the habit of backbiting and wrong reporting about his colleagues to impress his boss all the employees in theorganization know about it.

    At the time of performance appraisal the performance of Nikita was judged better than Salman even then

    their boss Mohan decided to promote Salman stating that being a female Nikita willnot be able to handle to

    the complication of higher post.

    a)Identify and explain the principle of management which was not followed by MNC.

    b)Identify the value which are being Ignored quoting the lines from the above para.

IP/CS

Create a project using Python and MySQL with Database connectivity. Topic can be taken by your choice eg. Hotel Management system, School Management System Etc.

ECONOMICS

1-Among the following statements separate the statements as per the given heads:
(A)Neither be included in domestic nor in national income of India
(B) Included both in domestic income as well as in national income of India
(C Included in domestic income but not in national income of India
(D) Included in national income but not in domestic income of India

(a) Services of a doctor taken by a charitable hospital
(b) Pension paid by govt. of India to its retired employees living in India
(c) Salary paid to a Chinese working in Indian Embassy at Beijing
(d) Salary paid to a Chinese working in Chinese Embassy at New Delhi
(e) Unemployment allowance paid to unemployed youths of tribal areas
(f) Profit earned by Citibank located at Jammu
(g) Profit earned by ICICI bank located at Jeddah, Saudi Arabia
(h) Free treatment of patients at Govt. hospital
(i) Remittances from NRI's to their relatives in India
(j) Income tax paid by households to govt.
(k) Services of a lawyer
(l) Production of goods for self-consumption
(m) Food cooked by mother for her family
(n) Net factor income earned from abroad
(o) Monetary help given to the victims of cyclone by red cross society in Orissa

2-There are some similar terms/alternate names that can be used in place of one another are given in the box to check your ability to recall them at times. Make sets of them:

Income from property & ENT	Transfer income	Consumption of fixed capital	Undistributed profit	National income	Change in stock	Domestic product	Economic assistance
Investment	Subsidies	NDP at FC	Leakages	Withdrawal	Real flow	Factor income	Gross investment
Nominal national income	Money multiplier	Foreign sector	Domestic territory	Expected obsolescence	Current replacement cost	Emolument of employees	Inventory investment
Price index	Mixed income	Retained earning	Unearned income	Value added method	Compensation of employees	Barter system	Capital formation
Citizen	GDP deflator	Real national income	Domestic territory	Earned income	Financial assistance		NVA at FC
CC-economy	Nominal flow	National product	Corporate savings	Deposit multiplier	Product method	Economic territory	Operating surplus
National income at constant price	Domestic income	Increase in stock	Capital consumption allowance	Income of self-employed	Savings of private sector	Credit multiplier	National income at current price
ROW	Money flow	GDCF	GDP at MP	Value added	National	Physical flow	NNP at FC

3-Correct the following formulae also give a proper reason :
(a)Operating surplus=Rent + Interest + Royalty + Dividend + Profit

(b)Value of output = Sale + Export + Change in stock + Production of goods for self-consumption

(c)Compensation of employees= Wages & salaries + Bonus + Free accommodation + Old age pension

(d)GDP at MP=Private final Exp. + Govt. Final Exp. + Gross domestic capital form. + Net Import

(e)GDP at MP= Value of output – Intermediate goods purchased – import of raw material

(f)NDP at FC= GDP at MP – depreciation – indirect taxes – subsidies

4- A good may be consumer good for one and may be intermediate or capital good for another. Keeping in mind the End-use classification of goods, distinguish how the same good can be consumer good or intermediate good or capital good at the same time:

(a)Purchase of a car

(b)Purchase of furniture

(c)Purchase of a tractor

5-Pre-independent India observed some constructive as well as destructive role of Britishers. Pen down some positive and some negative contributions of them taking into consideration the following areas:

(a)Means of transportation

(b)Commercialization of agriculture

(c)Means of communication

(d)Administrative set up

6- India has experienced so many foreign invasions and we have heard a lot about their rule from our fore-fathers, read in books and seen in movies. If we divide it into two eras PRE-BRITISH and BRITISH PERIOD. Can you differentiate between these two eras keeping in the mind the prime motive of their rule? (Answer should not exceed 70-80 words).

7-Briefly describe the main goals of 5 year plans in India. These objectives were kept since independence. Analyse the role of governments in achieving them till today. Also discuss the reasons behind the success and failures. (write a paragraph of 100 words approx.)

8-Narendra Modi government came into power in 2014, since then it has tacken some historical measures, some of them are mentioned below. Give your opinion as an economist on the pros and cons of these steps:

(a)Make in India

(b)Swachh Bharat Abhiyan

(c)Scrapping of Planning commission

(d)Demonetization

(e)Introduction of GST

Mathematics

1 Find the value of the k so that the function f defined below is continuous at x = 0

$$f(x) = \begin{cases} \dfrac{1 - cos4x}{8x^2}, & x \neq 0 \\ k, & x = 0 \end{cases}$$

2 If $f(x) = \begin{cases} \dfrac{x^3+x^2-16+2}{(x-2)^2}, & x \neq 2 \\ k & x = 2 \end{cases}$ is continuous at x=2, find the value of k.

3 If $y = \sin^{-1}\{x\sqrt{1-x} - \sqrt{x}\sqrt{1-x^2}\}$ and $0 < x < 1$ then find $\dfrac{dy}{dx}$.

4 Let $f(x) = \begin{cases} \frac{1-\cos x}{x^2}, & if\ x < 0 \\ a & if\ x = 0 \\ \frac{\sqrt{x}}{\sqrt{16+\sqrt{x}}-4}, & if\ x > 0 \end{cases}$ for what value of a, f is continuous at x=0.

5 Differentiate: $\tan^{-1}\left(\frac{\sqrt{1-x^2}}{x}\right)$ with respect to $\cos^{-1}(2x\sqrt{1-x^2})$ where $x \in \frac{1}{\sqrt{2}}, 1$.

6 If $y = (\cos x)^{(\cos x)^{(\cos x)^{\cdots\cdots\infty}}}$ show that $\frac{dy}{dx} = \frac{y^2\tan x}{y\log\cos x\ -1}$.

7 If $\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$ prove that $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$.

8 Verify the Rolle's theorem for $f(x) = \sin^4 x + \cos^4 x$ in $\left[0, \frac{\pi}{2}\right]$.

9 Verify the Mean value theorem for $f(x) = \sin x - \sin 2x$ in $[0, \pi]$

10 Find the angle of intersection of the curves $y^2 = 4ax$ and $x^2 = 4by$.

11 Find the equation of all the tangents to the curve $= \cos(x+y)$, $-2\pi \le x \le 2\pi$ that are parallel to the line $x + 2y = 0$.

12 If the sum of the lengths of the hypotenuse and a side of a right angled triangle is given, show that the area of the triangle is maximum when the angle between them is $\frac{\pi}{3}$.

13 Find the coordinate of the point on the curve $\sqrt{x} + \sqrt{y} = 4$ at which tangent is equally inclined to the axes.

14 Show that $f(x) = 2x + \cot^{-1} x + \log(\sqrt{1+x^2} - x)$ is increasing in R.

15 Using differentials find approximate value of $\sqrt{0.082}$

16 Find all points of local maxima /local minima of the function:

$$f(x) = \frac{3}{-4}x^4 - 8x^3 - \frac{45}{2}x^2 + 150.$$

17 If $x + y + z = 0$, prove that $\begin{vmatrix} xa & yb & zc \\ yc & za & xb \\ zb & xc & ya \end{vmatrix} = xyz\begin{vmatrix} a & b & c \\ c & a & b \\ b & c & a \end{vmatrix}$.

18 Given that $A = \begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix} B = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ find AB and use this to solve the system of

equations: $y + 2z = 7, x - y = 3, 2x + 3y + 4z = 17$.

19 Without expanding show that $\Delta = \begin{vmatrix} \cosec^2\theta & \cot^2\theta & 1 \\ \cot^2\theta & \cosec^2\theta & -1 \\ 42 & 40 & 2 \end{vmatrix} = 0$

20 In triangle ABC , If $\begin{vmatrix} 1 & 1 & 1 \\ 1+\sin A & 1+\sin B & 1+\sin C \\ \sin A + \sin^2 A & \sin B + \sin^2 B & \sin C + \sin^2 C \end{vmatrix} = 0$ then prove that ΔABC is an isosceles triangle.

21 Prove that $\begin{vmatrix} bc-a^2 & ca-b^2 & ab-c^2 \\ ca-b^2 & ab-c^2 & bc-a^2 \\ ab-c^2 & bc-a^2 & ca-b^2 \end{vmatrix}$ is divisible by $a+b+c$ and find the quotient.

22 If possible, using elementary row transformations, find the inverse of

$$\begin{bmatrix} 2 & 0 & -1 \\ 5 & 1 & 0 \\ 0 & 1 & 3 \end{bmatrix} \& \begin{bmatrix} 2 & -1 & 3 \\ -5 & 3 & 1 \\ -3 & 2 & 3 \end{bmatrix}.$$

23 Find the matrix A such that $\begin{bmatrix} 2 & -1 \\ 1 & 0 \\ -3 & 4 \end{bmatrix} A = \begin{bmatrix} -1 & -8 & -10 \\ 1 & -2 & -5 \\ 9 & 22 & 15 \end{bmatrix}.$

24 If $a_1, a_2, a_3, a_4 \dots a_n$ is an arithmetic progression with common difference d, then evaluate the following expression.

$$\tan\left[\tan^{-1}\left(\frac{d}{1+a_1a_2}\right) + \tan^{-1}\left(\frac{d}{1+a_2a_3}\right) + \tan^{-1}\left(\frac{d}{1+a_3a_4}\right) + \cdots + \tan^{-1}\left(\frac{d}{1+a_{n-1}a_n}\right)\right].$$

25 Show that $\tan\left(\frac{1}{2}\sin^{-1}\frac{3}{4}\right) = \frac{4-\sqrt{7}}{3}$ and justify why the other value $\frac{4+\sqrt{7}}{3}$ is ignored.

26 Find the real solutions of the equation: $\tan^{-1}\sqrt{x(x+1)} + \sin^{-1}\sqrt{x^2+x+1} = \frac{\pi}{2}$.

27 Show that $\tan^{-1}\left\{\tan\frac{\alpha}{2}.\tan\left(\frac{\pi}{4}-\frac{\beta}{2}\right)\right\} = \tan^{-1}\frac{\sin\alpha\cos\beta}{\cos\alpha+\sin\beta}$.

28 Find the values of x which satisfy the equation $\sin^{-1}x + \sin^{-1}(1-x) = \cos^{-1}x$.

29 Which is greater, $\tan 1$ or $\tan^{-1}1$?

30 Let R be a relation defined on the set of natural number N as follows

$R = \{(x,y): x,y \in N, 2x+y = 41\}.$ Find the domain and range of R. Also verify whether R is reflexive, symmetric and transitive.

31 Show that the function $f: R \to R$ defined by $f(x) = \frac{x}{x^2+1} \forall x \in R$ is neither one-one nor onto.

Entrepreneurship

Project Details Students will have to fulfill the following as a part of the project work:

Students will have to conduct the survey on the below mentioned topic.

A. Students conduct a simple market survey with the objective of estimating demand for an existing product in the market. Students will have to give an innovative suggestion to the product.
B. Conduct a survey for a new innovative product.
C. Topic's are :
    (i)   Mobile Gadgets
    (ii)   Washing Powder
    (iii)   Hair Oil
    (iv)   Ice Cream
    (v)   Educational Toys
    (vi)   Water Dispenser

<u>Guidelines for Survey no</u>. Students can choose any new innovative product which does not exist in the market as of now, and find out the demand for that product.

1. Test the feasibility of this innovation via market analysis, using objective questionnaire as a tool.

2. Questionnaire analysis: **Frame all the 4 P's of marketing**:

<u>i) Product</u>

a) Features

b) Design

c) Brand name

d) Logo – tagline

e) Package

f) Label

<u>ii) Price</u>

a) Pricing strategy

b) Price to retailers, wholesalers

c) Price for different segments

<u>iii) Place</u>

a) Transportation

b) Warehousing

c) Distribution strategy

d) Channel

<u>iv) Promotion</u>

a) Techniques

b) Strategy

c) Design at least 5 advertisings using different mediums

3. **Social responsibility/message**

<div align="center"><u>**Format for Presentation of Market Survey Report**</u></div>

1. The project should be done individually.

2. The project should be hand written in white one side ruled sheet or single colored sheets only.

3. Page limit – 20 to 25.

4. The survey report should be original and proper analysis for all questions in the questionnaire should be done.

5. The format for presentation of report which should be arranged in the following sequence:

a) External cover page:

<div align="center">Format for external cover page.

<u>**Market Survey Report on ………..**</u>

(Logo of the school)

(Name and address of the school)

Batch 2019-20</div>

Under the guidance of: Submitted by:

(Name of the teacher)   (Name of the student)

                                                         Roll No.:

b) **Acknowledgement**

I, (name of the student) do hereby declare that this project is my original work and I would like to thank (name of the teacher) for her wholehearted support and guidance for making it possible to complete this project on time. I would also like to thank my friends and family members for their kind support and guidance without which this project would not have completed.

(Name and sign of student)

c) **Executive summary:** This should not be more the a page and it contains in a concise form the detail about the entire project. Any person who wants to know about the project should be able to understand it once they read the executive summary

d)**Index :** The entire chapter list should be indicated along with page number.

e) **Introduction to the topic (Introduction, objectives)** : This will be around 1-2 pages having details about the project. For example in the above mentioned topic you can write in detail about the reason as to why you have chosen hair oil (in this case) as your product and what do you expect to find out. Objectives 1 pages (3-4 points)

f) **Profile of the organization** Write the detail about organization/competitive product or brands that you have chosen. (Page limit for this chapter will depend upon the project)

g) **Data analysis and interpretation:** A questionnaire should be prepared for the purpose of analysis. Guide lines for preparation of questionnaires;

- ➢ The number of questions should be a minimum of 8 and maximum 12.
- ➢ Handwritten.
- ➢ All questions should be closed ended, except of one open-ended question.
- ➢ Analysis of all the questions to be done.
- ➢ Analysis in the form of pie diagram or bar chart on graph sheet.

h) Conclusion and recommendation

i) Photographs

j) **Bibliography** Name of books used and websites addresses.

k) **Appendix** Definitions of terms used;

Physical Education

Solve all the questions containing 5marks at end of each chapter from unit one to unit four, in a separate notebook which should be meant for only Physical education

Draw neat diagrams of various Asana curing daily lifestyle's problems in human beings along with their other benefits.