

*Half Yearly Examination 2014 – 15***Time: 3:00 Hrs.****M. M. 100****Part - A**

- Q.1 How do small scale industries prove to be the second largest provider of employment in India? 1
- Q.2 Ramesh is hired to conduct financial feasibility of a project. Whether he will be termed as a promoter? 1
- Q.3 The workers of spark Industries often fall ill due to unhygienic working condition. Whether the business is socially responsible? 1
- Q.4 Give an example of Ehtical responsibility of business? 1
- Q.5 Why is India a preferred destination for BPO? 1
- Q.6 Which Industry provides services to primary and secondary Industry? 1
- Q.7 Why is the General Public unaware of the financial position of partnership business? 1
- Q.8 Why does mail order house require limited capital? 1
- Q.9 What is Retain earning? 1
- Q.10 What is meant by a "Statutory Declaration"? 1
- Q.11 What is the difference between Internal and external sources of raising funds? Explain. 3
- Q.12 Why does a Public Limited Company Appoint bankers, brokers and underwriters? 3
- Q.13 "Government checks over concentration of economic power". Do you agree? 3
- Q.14 Explain the following terms in short? $1\frac{1}{2}+1\frac{1}{2}=3$
- (i) Common seal (ii) Karta
- Q.15 Discuss any three function of commerce? 3
- Q.16 Write a note on various telecom services available for Enhancing business. 3
- Q.17 Describe briefly any two application of e-business. 3
- Q.18 What are the major Areas of social responsibility of business? 3
- Q.19 Discuss the different types of feasibility studies undertaken by promoters. 3
- Q.20 What is commercial paper? Explain its any three advantages. 4
- Q.21 Discuss the various argument in favor of and against elimination of wholesalers from the channels of distribution. $2+2=4$
- Q.22 Explain the role of chambers of commerce and Industry in promotion of trade. 4
- Q.23 "Small Scale Industries play a significant role in the developing countries like India". Justify the statement by giving suitable reasons. 4
- Q.24 Give the meaning of public deposits? How can a company raise money through public deposits? Can such deposits be used to meet long-term financial requirements of business? State its two merits? 4

- Q.25 Name the documents to be submitted during the incorporation stage of company and explain any two in detail? 5
- Q.26 Explain any five differences between share and debenture's? 5
- Q.27 Described the types of risk in detail with the assumed example's? 5
- Q.28 What are the Incentives provided by the government for Industries in backward and hilly areas?6

OR

Describe the features of small business in rural India.

- Q.29 Discuss the various steps to be followed by Public Limited Company in raising funds from the public. 6

OR

Promoter is not a trustee of the company but he stands in a fiduciary relationship. Comment.

- Q.30 Explain the social responsibility of business towards workers, customers and government. 6

OR

Certain factors have forced and convinced the business enterprises to consider their social responsibilities. Discuss the factors in brief.

Project + ORAL → 10

**** ALL THE BEST ****

Half Yearly Examination 2014 – 15

Time: 3:00 Hrs.

M. M. 70

General Instructions :-

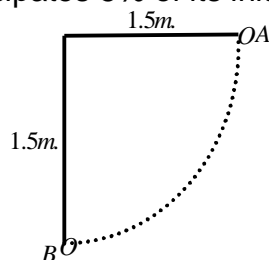
- (a) All questions are compulsory.
 (b) Question No. **1 to 5** are very short answer questions and carry **One mark each**.
 (c) Question No. **6 to 10** are short answer questions and carry **Two marks each**.
 (d) Question No. **11 to 22** are also short answer questions and carry **Three marks each**.
 (e) Question No. **23** may be value based carrying **Four marks**.
 (f) Question No. **24 to 26** are long answer questions and carry **Five marks each**.
 (g) Use log tables if necessary. Use of calculator is not allowed.

$$c = 3 \times 10^8 \text{ m / s}, h = 6.63 \times 10^{-34} \text{ js}, e = 1.6 \times 10^{-19} \text{ C}.$$

$$r_0 = 4\pi \times 10^{-7} \text{ Tm / A}, \frac{1}{4\pi r_0} = 9 \times 10^9 \text{ Nos}^2 / \text{C}^2$$

$$m_e = 9.1 \times 10^{-31} \text{ kg}, m_p = 1.67 \times 10^{-27} \text{ kg}.$$

- Q.1 Name two factors which determine whether a planet would have atmosphere or not. 1
 Q.2 State true or false with reason. 1
 In an elastic collision of two bodies, the momentum and energy of each body is conserved?
 Q.3 A man goes from the surface of earth to a height equal to the radius of earth what will be his weight relative to the earth? 1
 Q.4 Why machine parts gets jammed in winter? 1
 Q.5 Give an example where heat be added to a system without increasing its temperature. 1
 Question No. 6 to 10 carry Two Marks only.
 Q.6 Check whether equation is dimensionally correct. 2
 Consider an equation $\frac{1}{2}mv^2 = mgh$. m= mass of body, g= acceleration, h = height
 Q.7 State Galileo's law of odd numbers? 2
 Q.8 State and prove equation of continuity for an ideal liquid. 2
 Q.9 The bob of a pendulum is released from a horizontal position A shown in fig. If the length of the pendulum is 1.5m, what is the speed with which the bob arrives at the lowermost point B, given that it dissipates 5% of its initial energy against air resistance? 2



- Q.10 "Friction is an necessary evil" comment on this statement. 2
 Q.11 Explain why the angle of contract of mercury with glass is obtuse while that of water is acute? 3
 Q.12 What do you under stand by adiabatic process, find out work done in adiabatic process? 3
 Q.13 Prove that the elastic potential energy per unit volume is equal to $\frac{1}{2}$ xstress xstrain. 3

- Q.14 Show that the coefficient of volume expansions $\frac{(\Delta V/V)}{\Delta T}$ of body is thrice [3 time] its linear expansivity α . 3
- Q.15 Define angular projectile, find maximum, height attains & time of flight of the projectile motion. 3
- Q.16 To show that the work done in a complete cycle of p-v diagram is always equal to the area enclosed in that diagram. 3
- Q.17 Define magnus effect with a suitable example and draw suitable diagram also. 3
- Q.18 Air pressure in a car tyre increase during driving. Explain? 3
- Q.19 State gravitational potential and derived its expression. 3
- Q.20 Why water at the base of a waterfall is slightly warmer than at the top? Explain. 3
- Q.21 To find out moment of inertia of a circular disc about axis of rotation. Also find out radius of gyration. 3
- Q.22 Length, breadth and thickness of a block of wood are found to be (25.12 ± 0.01) cm respectively. Find the percentage error in the volume of the block with error limit. 3
- Q.23 Having seen a big stone falling from the top of a tower Ram pulled his friend Shyam away. The stone hit Ram slightly and he got hurt but he was saved from a major accident. Ram and Shyam play a game Shyam reach the top of tower which was 100m in height. He dropped a ball. At the same time, Ram on the ground projected another ball vertically upward with a velocity 25m/s. 4**
- (i) What values did Ram possess?
- (ii) What type of Inertia involve in this incident?
- (iii) When and when the two balls meet?
- Q.24 (a) Define Banking of road; find expression for the maximum velocity of a Vehicle on a banked road without skidding. 2½
- (b) In a circus a motorcyclist or a cyclist can drive his motorcycle along a vertical circle in a cage. He does not fall even at the highest point, if the velocity at the lowest point of the cage be equal to or more than $\sqrt{5gr}$. Where r = radius of cage. Find height of cage. 2½
- OR
- (i) Prove the result that the velocity V of translation of a rolling body (like a ring, disc and sphere) at the bottom of an inclined plane of height h is given by $v^2 = \frac{2gh}{1 + \frac{k^2}{R^2}}$.
- (ii) Drive the following equation of motion by calculus method – (a) $\theta = w_0t + \frac{1}{2}at^2$
(b) $w = w_0 + at$.
- Q.25 “The sum of energies of ideal flow of liquid is always conserved” prove this statement with suitable mathematical explanation? 5
- OR
- (i) Distinguish between conduction, convection and radiation with suitable diagram.
- (ii) What is the pressure on a swimmer 10m below the surface of lake?
- Q.26 Define satellite. Find expression for – 5
- (i) Orbital velocity (ii) escape velocity (iii) Total energy (iv) Time period of satellite.
- OR
- (i) State and prove work energy theorem for variable force?
- (ii) Find excess pressure inside a liquid drop and soap bubble.

*Half Yearly Examination 2014 – 15***Time: 3:00 Hrs.****M. M. 70**

Instructions: All questions are compulsory. Section A has Q.No.1 to 5 carrying 1 mark each.
 Section B has Q.No.6 to 10 carrying 2 marks each.
 Section C has Q.No. 11 to 22 Carrying 3 marks each.
 Q.23 is a value based question and carries 4 marks
 Q.24 to 26 are 5 marks question where an internal choice has been provided.

Section A

- Q1. What do you understand by a cursorial habitat?
 Q2. Name the type of roots found in a parasitic plant like Cuscuta.
 Q3. Give the term for the extra nuclear chromosomal material in some prokaryotes.
 Q4. What is the water potential of pure water at atmospheric pressure?
 Q5. Define Hydroponics.

Section B

- Q6. What is the difference in the composition of cell wall of Algae and that of other plants?
 Q7. Differentiate with examples, between protostomous and deuterostomous condition.
 Q8. Comment about the reproduction in Porifera .
 Q9. Differentiate between meristematic and permanent tissues (any two differences).
 Q10. What is inflorescence and what are its two basic types?

Section C

- Q11. Diagrammatically show : (i) Nitrogen cycle (ii) Development of root nodules
 Q12. Describe the C₄ Pathway. Why is it important?
 Q13. Which element is essential for pollen germination? What is the significance of Copper for a plant? Also explain the two deficiency symptoms of Magnesium.
 Q14. Write a detailed note on Facilitated diffusion.
 Q15. Discuss reproduction in Pteridophytes.
 Q16. Draw a diagram of a Bacteriophage and explain its structure.
 Q17. Differentiate between Chordates and Non Chordates.
 Q18. To which family does Asparagus belong? Write the floral formula and economic importance of that family.
 Q19. Explain the following terms: (i) Conjoint (ii) Casparian Strip (iii) Lenticels.
 Q20. Draw the diagram of different stages of Meiosis- I.
 Q21. (i) Write any two differences between a nucleotide and nucleoside.
 (ii) Show the formation of a Glycosidic linkage.
 Q22. What are plastids? Explain in detail the types of Plastids.
 Q23. **Organic substances are translocated in upward and downward direction through phloem.**
Answer the following questions
(i) What is the effect of blocking the phloem?
(ii) What do you find in the chemical analysis of phloem sap?
 Q24. Describe in detail the Hill Reaction. Also write its significance.

OR

What is TCA Cycle, explain it. Also write its significance.

- Q25. Describe Mitosis in detail. Also draw related diagrams.

OR

What are Nucleic acids. Explain in detail the structure of DNA.

- Q26. Draw the diagram of alimentary canal of cockroach and explain the process of digestion in it.

OR

Differentiate between all three types of muscles along with their diagrams.

**** ALL THE BEST ****

Half Yearly Examination 2014 – 15

Time: 3:00 Hrs.

M. M. 70

Part - A

- | | | |
|------|--|---|
| Q.1 | What do you mean by wellness? | 1 |
| Q.2 | Enlist the components of health. | 1 |
| Q.3 | What is the aim of physical education? | 2 |
| Q.4 | What do you mean by health related careers in physical education? | 2 |
| Q.5 | What is yoga? | 1 |
| Q.6 | What are the types of common sports injuries? | 1 |
| Q.7 | What do you mean by BMI? | 1 |
| Q.8 | What do you mean by human Anatomy? | 1 |
| Q.9 | Elucidate the objectives of modern Olympic games. | 2 |
| Q.10 | Discuss about the opening of ancient Olympic games. | 2 |
| Q.11 | Write a short note on Olympic flag. | 2 |
| Q.12 | What do you mean by anabolic steroids? | 2 |
| Q.13 | Briefly explain the meaning of lever. | 2 |
| Q.14 | Elucidate the importance of physical education in brief. | 3 |
| Q.15 | Enumerate the objectives of physical education in brief. | 3 |
| Q.16 | Enlist the performance enhancing substances and explain any two of them. | 3 |
| Q.17 | Discuss the Newton's law of motion. | 3 |
| Q.18 | What do you mean by muscular system? Explain the structural classification of muscles in detail. | 5 |
| Q.19 | Explain detail the somato types. | 5 |
| Q.20 | How can you prevent the sports injuries. Explain in detail. | 5 |
| Q.21 | Discuss the element of yoga. | 5 |

Part - B

- | | | |
|------|---|---|
| Q.22 | Write any four general rules of the game of your choice. | 2 |
| Q.23 | Write the History of the game of your choice. | 3 |
| Q.24 | Draw the field with all specifications and measurements of the game of your choice. | 5 |
| Q.25 | Briefly write about Rajiv Gandhi Khel Ratna Award. | 2 |
| Q.26 | Explain any three fundamental skills of the game of your choice. | 3 |
| Q.27 | Enlist common sports injuries in the game of your choice and suggest preventive measures for those sports injuries in detail. | 5 |

*Half Yearly Examination 2014 – 15***Time: 3:00 Hrs.****M. M. 100**

General Instruction :-

SECTION – A	READING	20	SECTION – B	WRITING & GRAMMAR	30
SECTION – C	LITERATURE & LONG READING	30			
SECTION – D	LISTENING SKILL & SPEAKING SKILL	20			

Section –A [Reading]

Q.1 Read the following passage carefully and answer the questions that follow: 12

- More and more young people are choosing to take a gap year between finishing school and starting university. During this time, a student might travel, engage in volunteer work overseas or undertake a working holiday abroad. During this gap year in Europe and the USA, students engage in advanced academic courses, extra-academic courses and non-academic courses, such as year long pre-college math courses, language studies, learning a trade, art studies, volunteer work, travel, internship, sports and more, all for the purpose of improving themselves in knowledge, maturity, decision-making leadership, independence, self-sufficiency and more, thus improving their resumes before going to college. These gap years are also called pathways, prep-year and bridge-year.
- The practice of taking time out developed in the United Kingdom in the 1960s. In India, the practice of taking time out after high school education, popularly called a 'drop year', has been on a steep rise in recent years, primarily due to students deciding to enrol in coaching institutions to prepare themselves for rigorous college entrance examinations, including the IIT-JEE as well as for the medical stream. In the United States, the practice of taking a 'year off' remains the exception. Taking a year out has recently become slightly more common for Americans, with the prevailing reasons being a feeling of being burned out of classroom education and a desire to understand oneself better.
- Alternatively, they may decide to take a gap year between graduating from university and embarking on a career, feeling the need for some time out before joining the rat race, or, in India, preparing for competitive examinations like the Civil Services. It is also known as a sabbatical year.
- Most students see the time as an opportunity to travel, with backpacking still being popular. The idea of travelling to as many foreign places as possible and staying in hostels or other budget accommodation appeals greatly. Doubtless, some of them will hitchhike, although hitchhiking can be a dangerous form of travel, especially if students are travelling solo.
- A large percentage of gap year students have wealthy parents who can easily subsidise their travel. Others have to save up before they go, often taking after-school jobs to do so. They are mostly travelling on a shoestring budget and frequently find that they have to look for some form of employment while travelling, in order to make ends meet.
- For example, they may work on local farms or in local hotels. By doing so, they not only earn some money, but they are likely to meet local people and acquire some understanding of their culture.
- There are some students who choose the work for the whole of their gap year. A number may decide to get work experience, either at home or abroad, in an area which they hope to make their career, such as medicine or computers. A large proportion of students are now choosing to work with a charity which arranges voluntary work in various parts of the world. The projects provide hands-on experience of a very varied nature, from teaching to helping build roads or dams.
- The gap year is not just an adventure. Young people can benefit greatly from encountering new and varied experiences and from communication with a wide range of people. Perhaps most importantly, gap year students learn how to stand on their own two feet.

- (a) On this basis of your reading of the passage, answer the following questions by choosing the correct option – **1×6=6**
- (i) Hitchhiking can be a dangerous form travel –
 (a) if students are travelling solo (b) if students are unaware of road map
 (c) if students are tired (d) None of these
- (ii) Students work on local farms when travelling abroad –
 (a) To earn money (b) to understand the culture
 (c) Both (a) and (b) (d) None of these
- (iii) Give the antonym of 'rarely' from para3.
 (a) Students (b) Subsidise (c) Frequently (d) Make
- (iv) Give the synonym of 'advantage' from last para.
 (a) Adventure (b) Encountering (c) Benefit (d) Perhaps
- (v) Find out the synonym of 'selecting' from para 1.
 (a) Finishing (b) Starting (c) Choosing (d) Year
- (vi) Find out the antonym of 'suspicious' from para2.
 (a) Possible (b) Popular (c) Greatly (d) Doubtless
- (b) On the basis of your reading of the passage, answer the following questions briefly.
- (i) How do students arrange their funds for travelling during the gap year? 1
- (ii) In which sector do a number of students want to take work experience during the gap year? 1
- (iii) What kind of projects are offered to students by charity? 1
- (iv) How can young people get benefited in a gap year? 1
- (v) "Gap year is not just an adventure". Justify. 2

Q.2 Read the following passage carefully :-

Whether work should be placed among the causes of happiness or among the causes of unhappiness may perhaps be regarded as a doubtful question. There is certainly much work which is exceedingly irksome and as excess of work is always very painful. However, work is not to most people less painful than idleness. There are in work all grades, from mere relief to tedium upto the profoundest delights, according to the nature of the work and the abilities of the worker. Most of the idle rich suffer unspeakable boredom as the price of their freedom from drudgery. At times they may find relief by hunting big game in Africa or by flying round the world, but the number of such sensations is limited, especially after youth is past. According, the more intelligent rich men work nearly as hard as if they were poor.

Work therefore is desirable, first and foremost as a preventive of boredom, for the boredom that a man feels when he is doing something out of compulsion; though uninteresting work is as boring as having nothing to do. With this advantage of work, another is associated, namely that it makes holidays much more delicious when they come. Provided a man does not have to work so hard as to impair his vigour, he is likely to find far more zest in this free time that an idle man could possibly find.

The second advantage of most paid work and some unpaid work is that it gives chances of success and opportunities for ambition. In most work, success is measured by income and while our capitalistic society continues, this is inevitable. However dull work may be, it becomes bearable if it is a means of building up a reputation. Continuity of purpose is one of the most essential ingredients of happiness and that comes chiefly through work.

- (a) On the basis of your reading of the above passage make notes on it, using headings and sub-headings. Use recognizable abbreviations wherever necessary (minimum4). Supply an appropriate title to it. 5
- (b) Write a summary of the above passage in about 80-100 words. 3

Section –B [Writing & Grammar]

- Q.3 You are Sonal / Somya of Zenith Public School, Kolkata. Your school has decided to organise a cultural programme to raise funds for the victims of flood in South India. Draft a NOTICE for your school notice board. 4

OR

You had just visited the International trade fair that was very crowded and your 6 years old son got lost in the crowd. He has been missing since then write an advertisement.

- Q.4 You are Suresh Mathur. You bought a freeze manufactured by Plazar company from Chandigarh. After 10 days its started giving problem. Write a letter to Plazar Company asking them to replace the piece or to refund the money. 6

OR

You are Ajay / Amita living at B-3 Saket, New Delhi. Write a letter to the Editor of a newspaper drawing attention of the authorities towards the insanitary conditions prevailing in your neighbourhood due to the garbage thrown by the weekly bazaar vendors who never care to pick up their garbage.

- Q.5 Write a speech on the topic “Role of parents in Childer’s Education” in not more than 200 words.

OR

Write an Article for a newspaper in about 200 words “The problem of unemployment in India”. 10

- Q.6 The following passage is not edited. There is one error in each line. 4

Electricity was supplied to a house	(a)	Was----- is
through cables. In cities a	(b)	-----
cables are usually. lay underground,	(c)	-----
but in towers or villagers they may	(d)	-----
be carried in poles.	(e)	-----
Inside the house these cable	(f)	-----
is connecting to a main switch.	(g)	-----
In a emergency, the	(h)	-----
power can be turned of with	(i)	-----
the help of the main switch,		

- Q.7 Rearrange the words to form meaningful sentences:- 2

- (i) no fixed / puller / has / hours / working / a rickshaw
(ii) at a time / in emergency / usually a rickshaw / or three / one or two / puller / carries / persons.

- Q.8 Read the conversation given below and complete the passage. 4
- Jyoti : When is your aunt visiting you?
Kiran : She is planning to come in Sept.
Jyoti : Wouldn't our exams have started by then?
Kiran : That's true, I've called her and requested her to come only after my exams.
Jyoti asked Kiran (a) _____. Kiran replied that (b) _____. Jyoti enquired (c) _____ by then. Kiran said that it was true and added (d) _____ to come only after her exams.

Section –C [Literature]

- Q.9 Read the extract given below and answer the questions that follows :- 3
- And forever, by day and night, I give
Back life to my origin,
And make pure and beautify it;
- (i) Who is 'I' in the above lines?
(ii) How does 'I' help its origin? What is its origin?
(iii) Name the poem and the poet?

- Q.10 Answer any three of the questions given below :- 3x3=9
- (i) Why did the narrator feel uncomfortable even though she was surrounded by the things dear to her.
(ii) What does the notice "The world's dangerous animal at a cage in the zoo at Zambia, signify.
(iii) What information do we gather about Mrs. Pearson from the play?
(iv) Who discovered Tut's tomb? What were the things he was buried with?

- Q.11 Answer the following in 120-150 words :- 6
- The problems of overpopulation directly affect our everyday life. Discuss.

OR

Justify the title of the story "The Address".

- Q.12 Why did the Ghost want Virginia to fulfill the wish for him. 6
- Q.13 How does the writer justify the Canterville chase is a haunted place? 6

SECTION – D LISTENING SKILL & SPEAKING SKILL 20

**** ALL THE BEST ****

Half Yearly Examination 2014 – 15**Time: 3:00 Hrs.****M. M. 100**

General Instructions :-

- (i) All questions are compulsory.
- (ii) Marks for questions are indicated against each.
- (iii) Question No. 1 to 5 are very short answer (MCQ) carrying One Mark each.
- (iv) Question No. 6 to 14 are short answer I carrying Three Marks each.
- (v) Question No. 15 to 18 are short answer II carrying Four Marks each.
- (vi) Question No. 19 to 25 are long answer carrying Six Marks each.

- Q.1 (i) How much calories intake is required in rural urban areas in India? 1
 (a) 2400 calories & 2000 calories (b) 2400 calories & 2100 calories
 (c) 2200 calories & 2000 calories (d) None of these
- Q.2 Which one is considered as direct tax? 1
 (a) Sales Tax (b) VAT (c) Custom duty (d) Corporate Tax
- Q.3 What is an open ended series? 1
- Q.4 Pie diagrams are drawn only when – 1
 (a) Percentage distribution is given (b) degree value is given
 (c) Both (a) & (b) (d) None of these
- Q.5 In more than method cumulative frequency shows – 1
 (a) Increasing order (b) Decreasing order (c) Speculative (d) None of these
- Q.6 How did commercialization of agriculture resulted in famines? 3
- Q.7 Does the lottery method always gain you a random sample? Explain 3
- Q.8 Problem of choice is unavoidable in the ordinary business of life. How? 3
- Q.9 What are the functions of world trade organization? 3
- Q.10 What is the disadvantage of foreign trade in the Indian economy at the eve of Independence? 3
- Q.11 Explain the central problem of the economy? 3
- Q.12 Following data relate to the marks secured by students in their statistics paper. Calculate in the form of more than ogive. 3

Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40
No. of students	4	6	10	10	25	22	18	5

- Q.13 Mention any three causes, which were responsible for economic reforms. 3
- Q.14 Explain :- 1+1+1=3
 (a) Define Investment? (b) stabilization measures (c) Structural Reforms measure.
- Q.15 Explain main reason & important effects of green revolution? 4
- Q.16 Mention any four common characteristics of poor people? 4

- Q.17 Following are the data about the market share of 4 brands of TV set sold in Panipat and Ambala. Present the data by a pie-diagram. 4

Brands	Unit sold in Panipat	Unit sold in Ambala
Samsung	480	625
Akai	360	500
Onida	240	438
Sony	120	312

- Q.18 Explain the concept of :- 4
- (i) Bivariate frequency distribution (ii) Tally Bars
 (iii) Inclusive series (iv) Mid-value Frequency
- Q.19 What are the main problems of human capital formation in India? 6
- Q.20 Explain the causes of unemployment? 6
- Q.21 Briefly discuss the various measures adopted by the Government of India to improve the system of agricultural marketing. 6
- Q.22 Calculate mode using the grouping technique :- 6

Size	2	3	4	5	6	7	8	9	10	11	12	13
Frequency	3	8	10	12	16	14	10	8	17	5	4	1

- Q.23 Calculate quartile deviation and coefficient of quartile deviation. 6

Age (Year)	0-10	10-20	20-30	30-40	40-50	50-60
No. of Person	4	8	5	4	9	10

- Q.24 (a) Calculate median from the given data :- 3+3=6

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No. of students	42	38	120	84	48	36	31

- (b) Calculate mode from the following data :-

C.I.	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	5	8	12	16	28	15	3	2

- Q.25 Find out mean deviation & coefficient of mean deviation using arithmetic mean from the following data :- 6

Profit	0-10	10-20	20-30	30-40	40-50
Shops	5	10	15	20	50

ORAL →

10

**** ALL THE BEST ****

Code. No. 11/Computer Science/10-12-14/NLCS/36
Half Yearly Examination 2014 – 15

Time: 3:00 Hrs.

M. M. 70

- $\frac{1}{2} \times 12 = 6$**
- Q.1 Number system conversion :
- (i) $(132.15)_{10} = (?)_2 = (?)_8 = (?)_{16}$
 - (ii) $(17)_8 = (?)_2 = (?)_{10} = (?)_{16}$
 - (iii) $(110101011)_{10} = (?)_8 = (?)_8 = (?)_{16}$
 - (iv) $(F7)_{16} = (?)_{10} = (?)_2 = (?)_8$
- Q.2 Define - **1×3=3**
- (i) Minicomputer
 - (ii) Cache memory
 - (iii) System software
- Q.3 Explain type conversion in C++ **2**
- Q.4 Why is main () function so important? **2**
- Q.5 Give difference between **1×5=5**
- (i) Break V/s exit (0)
 - (ii) For loop V/s while loop
 - (iii) Array V/s structure
 - (iv) Program V/s user defined function
 - (v) Procedural programming V/s Non procedural programming
- Q.6 Write programs for the following :-
- (i) To print sum of columns in 2D array **2**
 - (ii) To calculate total no. of consonants and vowels in a given string **2**
 - (iii) To find min no. from an array of 10 no's. **3**
 - (iv) 0,1,1,2,3,5,8,13 -----n **4**
 - (v) 1,4,9,16-----n **2**
 - (vi) 2,6,12,20,30,42-----n **2**
 - (vii) To check whether a given string is palindrome **4**
 - (viii) To print transpose of matrix **2**
 - (ix) To print sum of 1D array & elements **2**
- Q.7 Write a function to check whether a given no is prime or not. **3**
- Q.8 Write outputs of the following C++ codes :
- (i)

```
void main ( )
{ int a =4;
  cout <<a<<+++a<<a;
  cout<<a;
}
```

2
 - (ii)

```
void main ( )
{ int a [10]={1,2,3,4,5,6,7,8,9,10};
  int i=0;
  cout<<a[i+i];
  cout<<a[++i];
  cout<<a[i++];
  cout<<a[i];
}
```

2
 - (iii)

```
void main ( )
{ int a,b,c;
  for (a=1,a<=10;a+=5);
  for (a+5;b<20;b+=5)
    C=a+b;
  cout<<C;
}
```

2

```
(iv) int g=20;
void function ( int & x, int y)
{x=x-y; y=x*10;
  cout<<x<<;<<y<<"\n";
}

Void main ( )
{ int g=7;
  Function (g, : : g );
  cout <<g<< ',' << : : g<< "\n"
  Function ( : :g,g);
  cout<<g<<;<<: : g<< "\n";
}
```

Q.9 Rewrite the code after removing all errors :-

$\frac{1}{2} \times 10 = 5$

- (i) void main ()
 - { cout << a
 - a=7;
 - if (a>10);
 - cout >>a
 - cout "science";
- (ii) cout << "a="a;
- (iii) m=5,n=12;a=15
- (iv) cout<< "x";<<x;
- (v) cin >>y;>>i
- (vi) cin >> "\n">>y;
- (vii) cout >> "\n"abc";
- (viii) a=b+c
- (ix) break =x*y;
- (x) (=int=5;

Q.10 Define Default Argument Function. Write an example also.

3

Q.11 Give difference between union and structure.

2

Q.12 What is the difference between call by value and call by reference. Explain with example.

4

Q.13 Explain :

$1 \times 3 = 3$

- (i) Logical operator
- (ii) Extern variable
- (iii) H coder files

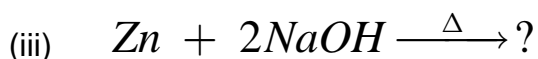
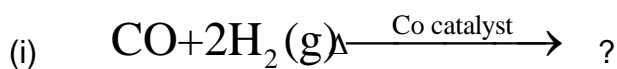
** ALL THE BEST **

*Half Yearly Examination 2014 – 15***Time: 3:00 Hrs.****M. M. 70**

General Instructions :-

- (i) All questions are compulsory.
 (ii) Question No. 1 to 5 are carrying One Mark each.
 (iii) Question No. 6 to 10 are carrying Two Marks each.
 (iv) Question No. 11 to 22 are carrying Three Marks each.
 (v) Question No. 23 is carrying Four Marks.
 (vi) Question No. 24 to 26 are carrying Five Marks each.
- Q.1 How are .50m Na_2CO_3 and .50M Na_2CO_3 different? 1
- Q.2 Why are Bohr's orbits called stationary states? 1
- Q.3 Which one out of O_2^+ & O_2^- is more stable on the basis of bond order calculation? 1
- Q.4 In terms of Char'l's law explain why -273°C is the lowest term. 1
- Q.5 What will happen to internal energy if work is done by the system? 1
- Q.6 $[\text{SiF}_6]^{2-}$ is known but $[\text{CF}_6]^{2-}$ is not formed. Explain. 2
- Q.7 An alloy of metal X and Y weight 12 gm and contain atom X and Y in the ratio for 2 : 5. The percentage by mass of Y in the sample is 20. If atomic mass of X is 40. What is the atomic mass of metal? 2
- Q.8 What is the basic principle of chromatography? 2
- Q.9 Calculate the formal charges on the atoms in – 2
- (i) Nitrite ion (ii) Carbonate ion
- Q.10 (i) Why NF_3 is pyramidal while BF_3 is triangular planer 2
- (ii) CO_2 is non polar while H_2O is polar. Why?
- Q.11 (i) 2nd I.P. of Ca is more than 1st I.P. yet Ca forms CaCl_2 not CaCl . Why? 3
- (ii) Be and Mg do not give colour to flame whereas other alkaline earth metals do so. Why?
- Q.12 (i) What is the basis of Hess's law of heat summation? 3
- (ii) Derive the relation between C_p & C_v .
- Q.13 (i) What effect the branching of an alkene has on its M.P.? 3
- (ii) Write the structural formulae of all possible isomers of $\text{C}_2\text{H}_2\text{Cl}_2$ and indicate which of these is non polar?
- Q.14 Draw the structure of H_2O_2 give its storage condition with suitable reason. 3
- Q.15 Give the following reaction :- 3
- (i) Sabatier-sanderens reaction (ii) Wurtz fitting reaction (iii) Fitting reaction
- Q.16 Define free expansion of gaseous system. Calculate the work done by the system? 3
- Q.17 In a periodic table comment on the position of Hydrogen. 3

Q.18 Complete the reactions : 3



Q.19 Write a short note on PA – PA back bonding? With a suitable example what are its consequences? 3

Q.20 Derive the ideal gas equation? (by using various laws equation with the statements) 3

Q.21 Write a short note on limiting reagent? With suitable example. 3

Q.22 Calculate the energy of photon whose frequency is 3×10^{15} Hz. 3

Q.23 (i) **A hydrocarbon (X) decolorises Br_2 water. On ozonolysis it gives 3 methyl butanal & formaldehyde. Give the name of compound.** 2+2=4

(ii) **An alkyne (y) has molecular formula C_6H_8 . It react neither with sodanide nor with ammonical cuprous chloride. Give the name of compound.**

Q.24 20gm of CaCO_3 is treated with 20 gm HCl. How many gm of CO_2 are generated? Which is the limiting ageno? 5

OR

Calculate the no. of moles for –

(i) 4.6gm of sodium (ii) 5.6 litre of CO_2 at STP

Q.25 The Vividh Bharti Station of all India Radio, Delhi broadcast & on frequency of 1.368 KHz. Calculate the wavelength of electromagnetic radiations emitted by the transmitter which part of the electromagnetic spectrum does it belongs to? 5

OR

What is the wavelength of light omitted when the electron in a hydrogen atom undergoes transition from an energy level $n=4$ to an energy level with $n=2$?

Q.26 The equilibrium constant for reaction is 10. What will be the value of ΔG° . 5

OR

Write a short note on : Spontanedy & Gibb's free energy.

** ALL THE BEST **

Half Yearly Examination 2014 – 15

Time: 3:00 Hrs.

M. M. 100

General Instructions :-

- (i) All questions are compulsory.
- (ii) The Question paper consists of 26 questions divided into three Sections A, B & C, **Section A** comprise of 6 questions of **One Mark each**, **Section B** comprises of 13 questions of **Four Marks each**. **Section C** comprises of 7 questions of **Six Marks each**.
- (iii) Use of calculators is not permitted.

Section - A

- Q.1 Let $A = \{x : x \in R, x \geq 4\}$ and $B = \{x \in R : x < 5\}$ then $A \cap B = ?$
- Q.2 If $\eta(A) = M$ and $\eta(B) = \eta$ then find the total number of non empty relations that can be defined from A to B .
- Q.3 If z is a complex number such that $|z-1| = |z+1|$ then show that $\operatorname{Re}(z) = 0$.
- Q.4 Evaluate ${}^n C_r + 2{}^n C_{r-1} + {}^n C_{r-2}$.
- Q.5 If AM and GM between two numbers is 5 & 4 respectively then find the two numbers.
- Q.6 Without using Pythagoras theorem show that (12,8) (-2,6) and (6,0) are the vertices of right angled triangle.

Section - B

- Q.7 In a class of 140 students, 60 play foot ball, 48 play Hockey and 75 play Cricket, 30 play Hockey and Cricket, 18 play Football and Cricket, 42 play Football and Hockey and 8 play all the three games use venn diagram to find –
- (i) Student who do not play any of these three games.
 - (ii) Students who play only cricket.
 - (iii) Students who play Football and Hockey, but not cricket.
 - (iv) Students who play only Hockey.
- Q.8 Find the domain and range of the following relations -
- (i) $R = \{(x, y) : x, y \in N, y = x^2 + 3 \text{ and } 0 < x < 5\}$
 - (ii) $R = \{(x, y) : x, y \in N, y = \frac{1}{1+x} \text{ and } x \text{ is odd natural number}\}$
- Q.9 Find the value of $\tan \frac{\pi}{8}$.
- Q.10 If $\frac{\cos(A+B)}{\cos(A-B)} = \frac{\sin(C+D)}{\sin(C-D)}$, Prove that $\tan A \tan B \tan C + \tan D = 0$.
- Q.11 Prove that by using PMI $2 \cdot 7^n + 3 \cdot 5^n - 5$ is divisible by 24 for all $n \in N$.
- Q.12 Prove that by using PMI for all $n \in N$ $(2n+7) < (n+3)^2$.
- Q.13 If $|z_1| = |z_2| = \dots = |z_n| = 1$, prove that $|z_1 + z_2 + z_3 + \dots + z_n| = \left| \frac{1}{z_1} + \frac{1}{z_2} + \frac{1}{z_3} + \dots + \frac{1}{z_n} \right|$.
- Q.14 Solve the following inequalities graphically $3x + 2y \leq 150, x + 4y \leq 80, x \leq 15, y \geq 0, x \geq 0$.
- Q.15 In how many of the distinct permutations of the letters in 'MISSISSIPPI' do the four I's not come together.

- Q.16 If the coefficient of second, third and fourth terms in the expansion of $(1+x)^{2n}$ are in A.P. then show that $2n^2 - 9n = -7$.

OR

Find the sum to n terms of the series $5 + 11 + 19 + 29 + 41 \dots$.

- Q.17 Let S be the sum P the product and R the sum of reciprocals of n terms in a G.P. prove that $P^2 R^n = S^n$.
- Q.18 If lines whose equations are $y = m_1x + c_1$, $y = m_2x + c_2$ and $y = m_3x + c_3$ meet at a point then prove that $m_1(c_2 - c_3) + m_2(c_3 - c_1) + m_3(c_1 - c_2) = 0$,
- Q.19 If P is the length of perpendicular from the origin on the line $\frac{x}{a} + \frac{y}{b} = 1$ and a^2, p^2, b^2 are in A.P. then show that $a^4 + b^4 = 0$

Section - C

- Q.20 If $\tan\left(\frac{\pi}{4} + \frac{\theta}{2}\right) = \tan^3\left(\frac{\pi}{4} + \frac{\alpha}{2}\right)$. Prove that $\sin\theta = \frac{x \sin\alpha + \sin^3\alpha}{1 + 3\sin^2\alpha}$.

Prove that :

- Q.21 The sum and product of two complex numbers are real if and only if they are conjugate of each other.
- Q.22 A solution of 8% boric acid is to be diluted by adding a 2% boric acid solution to it. The resulting mixture is to be more than 4% but less than 6% boric acid if we have 640 l of the 8% solution, how many litres of the 2% solution will have to be added.

OR

Solve the linear in equality $\frac{2x+5}{x-1} > 5$.

- Q.23 If ${}^{n+2}C_8 : {}^{n-2}P_4 = 57:16$ then find the value of n .
- Q.24 The coefficients of the $(r-1)^{th}$, r^{th} and $(r+1)^{th}$ terms in the expansion of $(x+1)^n$ are in the ratio 1:3:5. Find n & r .
- Q.25 If a and b are the roots of $x^2 - 3x + p = 0$ and c, d are roots of $x^2 - 12x + q = 0$ where a, b, c, d form a G.P. Prove that $(q+p):(q-p) = 17:15$.
- Q.26 If $f(x) = \frac{b(x-a)}{b-a} + \frac{a(x-b)}{a-b}$, then show that $f(a+b) = f(a) + f(b)$.

OR

Find the range of $f(x) = 1 + 3\cos 2x$.

**** ALL THE BEST ****

Code. No. 11/Accountancy/08-12-14/NLCS/70

Half Yearly Examination 2014 – 15

Time: 3:00 Hrs.

M. M. 100

Q.1 Ascertain cost of goods sold from the following: 2

Particulars	Amount (`)
Opening stock	8500
Direct expenses	4800
Indirect expenses	5200
Purchases	30700
Closing Stock	9000

- Q.2 Explain any two limitation of Accounting. 2
- Q.3 What do you mean by compound entry ? Explain by example. 2
- Q.4 Write any three difference between Capital Expenditure & Revenue Expenditure. 3
- Q.5 Define following terms of bills of Exchange- 3
 (a) Noting charges (b) Bill discounted (c) Bill Renewal
- Q.6 What is Depreciation ? Explain any two methods of Providing Depreciation ? 3
- Q.7 On 1st January 2013 Rajat drew a bill on Prakash for ` 2000 payable after 3 months. Prakash accepted the bill and returned to Rajat. After 10 days Rajat endorsed the bill to his creditors Dinesh in final settlement of ` 2100. On the due date the bill was dishonoured and Dinesh paid ` 40 for noting charges. Pass journal entries in the books of Dinesh. 3
- Q.8 What do you mean by Journal ? Explain any three Advantage of Journal. 4
- Q.9 A company purchased a machine on 1st July, 2010. On 31st December 2011 book value of the machine ` 25650. Depreciation provided on the machine 10% per annum on 31st December of each year on W.D.V. Calculate purchase price of machine. 4
- Q.10. Explain different type of two way error by example. 4
- Q.11 Prepare an accounting equation from the following : 4
 (a) Started business with cash ` 100000
 (b) Purchased goods for cash ` 20000 and on credit ` 30000
 (c) Sold goods for cash costing ` 10000 and on credit costing ` 15000 both at profit of 20% of cost.
 (d) Goods returned to creditors ` 500.
- Q.12 Explain following concepts: 4
 (a) Matching Concept (b) Cost Concept
- Q.13 Pass Journal Entries for following transactions in the books of Gopal: 6
 (a) Pawan sold goods to Gopal ` 200000 [T.D. 20%, C.D.5%, 60% credit]
 (b) Goods loss by theft ` 15000. Insurance company accepted a claim of ` 11000 same day.
 (c) Mohit Purchased goods from Gopal ` 60000. [T.D. 20%, VAT- 5%]
- Q.14 Prepare a Bank Reconciliation Statement on 31st December 2010 from the following Information's- 6
 (i) Pass book shows credit balance ` 62000.
 (ii) Cheque were paid in to the bank in December, 2010 were credited in January, 2011 ` 22400
 (iii) Cheque issued in December, 2010 were presented in January, 2011 ` 18700
 (iv) The pass book was shows debit of ` 450 for bank charges.
 (v) Cash Book debit side total Overcast by ` 3200.
- Q.15 Prepare Double Column Cash Book of Jain Ltd. of January, 2013 8
- | Date | Transactions |
|------|---|
| 01 | Cash in hand ` 3600. Bank Overdraft ` 1000 |
| 07 | Cheque received from Rajesh ` 4200 and deposited in the bank same day. |
| 09 | Paid in to bank ` 1800 |
| 14 | Jagdish who owed from Jain ltd. by ` 500 become insolve only 50% amount paid. |
| 18 | Withdrawal from bank for personal use ` 800 |
| 25 | Received ` 4000 from Lalit and out of it deposited in to the bank ` 3500 |
| 28 | Rajesh cheque dishonoured & Bank charged ` 300 for this. |

- Q.16 Prepare Sales Book of a dealer from the following information for the year 2012 and prepare sales account 8
- Sept.01 Sold Goods to Rajesh Bros.
30 Books of Accountancy @ ` 50 per book.
20 Books of B.St. @ ` 40 per book.
Trade discount 5%
- Sept.15 Sold Goods to Chanwala Book Depot.
30 Books of Science @ ` 60 per book.
20 Books of Biology @ ` 70 per book.
Trade discount 5%
- Sept.20 Sold Goods to Kamal Bros with cash.
30 Books of Accountancy @ ` 50 per book.
20 Books of B.St. @ ` 40 per book.
Trade discount 10%
- Sept.24 Sold Goods to Gupta & Bros.
80 Books of Economics @ ` 50 per book.
20 Books of Computer @ ` 40 per book.
Trade discount 4%
- Q.17 Pass rectify entries for following errors 8
- (a) Personal travelling expenses ` 2500 recorded in general expense account ` 500.
(b) Wages paid for purchase of machinery ` 4600 recorded in machinery account ` 4000
(c) Interest received ` 5800 recorded at Interest Paid account ` 3800
(d) Goods purchased from Kunal ` 7500 recorded in sales book ` 2500.
- Q.18 Prepare Machine Account for three years from following information 8
- 01-06-2008 Purchase 1st Machine ` 90000
30-04-2009 Purchase 2nd Machine ` 80000
01-02-2010 Sale 1/3 1st Machine at ` 12500
01-08-2010 Purchase 3rd Machine ` 100000
- Other information:
Rate of Depreciation 12% Per annum as per Straight Line Method.
Closing date of accounting 31st March.
- Q.19 On 1.1.10 X sold Goods to Y of Rs. 20000. Y accepted a bill for this amount & returned to X & duration of bill is 3 months. X discounted the bill from bank @ 12% P.A. same day. On maturity date the bill was dishonoured. Bank paid 500 as noting charges. Y paid Rs. 5000 & Noting charges in cash to X & accepted a new bill for remaining amount for two months with Interest. Interest charged @ 12% P.A. on maturity date of new bill Y become in solve & paid only 40% amount. 8
- Q.20 Prepare Financial Statement from following Trial Balance 10

Debit Balances		Credit Balances	
Furniture and Fittings	640	Capital	12890
Motor Vehicle	6250	Bills Payable	200
Building	7590	Sundry Creditors	2500
Bad Debts	125	Sales	15450
Sundry Debtors	3800	Bank Overdraft	2850
Opening Stock	3460	Purchase Return	125
Purchases	5575	Commission	175
Sales Return	200		
Advertising	450		
Interest	118		
Cash in Hand	650		
Taxes and Insurances	1250		
General Charges	782		
Salaries	3300		
Total	34190	Total	34190

Closing stock ` 1850