SHARDA VIDYALAYA, RISALI, BHILAI
CLASS – XII (Maths + Bio.)
VACATION HOMEWORK

S. No.	Subject	Topic
1.	**ENGLISH**	1. Prepare a project on **"When people are enslaved, as long as they hold fast to their language it is as if they had the key to their prison."** **Use the following points to elaborate your content of project** Importance of Language Meaning of 'Linguistic chauvinism' Find examples in history where conquered people had their language taken away from them or had a language imposed of them—What was the result/outcome Problems faced by linguistic minority How can they keep their language alive Linguistic human rights Linguistic Chauvinism examples from English literature 2. **You are Bala/Bandhini, school counsellor of Bala Vidyagram School, Dharti Bagh. Your school is organising a Career Counselling Fair. Write a notice encouraging students to attend the fair. Mention the benefits and include necessary details.** **3. At the end of his last lesson, M. Hamel decides to leave a little note for each of his students for them to find the next day at their desks. Based on your reading of the story, what might his note to Franz read?** **4. Imagine the mother gets to know of the poet's persona's fears. Write a letter, as the mother, telling the daughter why she must not dwell on these fears.(My mother at sixty six)** **5. At the beginning of the story, Sam is sceptical of Charley's discovery of the third level. By the end of the story, the reader is told that he found the third level and travelled back in time. How would Sam diagnose himself?**
2.	**HINDI**	**क) अभिव्यक्ति और माध्यम पुस्तक से दिए गए निम्नलिखित प्रश्नोत्तरों को कॉपी में लिखें।** प्रश्न 1.नाटक विधा में समय, शब्द और कथ्य का महत्व बताइए। उत्तर : समय-नाटककार को समय का विशेष ध्यान रखना पड़ता है। उसे एक निश्चित समय-सीमा में ही नाटक पूरा करना पड़ता है। दर्शकों के धैर्य को देखकर ही. नाटक की समयावधि निर्धारित की जाती है।

शब्द-नाटक का दूसरा महत्त्वपूर्ण तत्त्व 'शब्द' है। 'शब्द' नाटक का शरीर होता है। अतः नाटककार को सांकेतिक भाषा का प्रयोग करना चाहिए। व्यंजनापरक शब्दों का प्रयोग नाटक की रोचकता में वृद्धि करता है।

कथ्य-नाटककार को यह ध्यान रखना चाहिए कि नाटक मंच पर अभिनीत होगा। इसलिए सभी घटनाओं को क्रम से रखना चाहिए जिससे नाटक शून्य से शिखर की ओर विकास करे। इस प्रकार कथ्य को सही ढंग से प्रस्तुत
करने में नाटक की सफलता निहित है।

प्रश्न 2.नाटक का वर्तमान काल, भूतकाल और भविष्यकाल से क्या सम्बन्ध है?
उत्तर :
नाटककार अपनी रचना की विषय वस्तु भूत अथवा भविष्य किसी भी काल से ले सकता है। नाटक का काल कोई भी हो परन्तु नाटक एक विशेष समय में एक विशेष स्थान पर वर्तमान काल में ही घटित होता है। जैसे-नाटक में कोई ऐतिहासिक या पौराणिक कहानी को हम वर्षों पश्चात् उसे पुन: मंच पर प्रत्यक्ष घटित होते हुए देख सकते हैं।

प्रश्न 3.'संवाद नाटक के प्राण होते हैं?" सिद्ध कीजिए।
उत्तर :
नाटक का सबसे महत्वपूर्ण तत्त्व संवाद है। संवादों के बिना नाटकों की गतिशीलता की कल्पना भी नहीं की जा सकती। संवादों, से ही नाटक के चरित्रों का विकास होता है। संवाद ही कथ्य को गतिशील बनाते हैं। ये जितने सहज होंगे उतना ही दर्शकों के मर्म को छुएँगे। अतः नाटक. के संवादों को परिवेश के अनुकूल ही सहज-स्वाभाविक होना चाहिए तभी वे दर्शकों को बाँधने में सफल होते हैं और नाटक की सार्थकता भी तभी सिद्ध होती है।

प्रश्न 4.नाटक में स्वीकार और अस्वीकार की अवधारणा से आप क्या समझते हैं? लिखिए।
उत्तर :
नाटक में स्वीकार के स्थान पर अस्वीकार का अधिक महत्त्व होता है। नाटक में अस्वीकार तत्त्व के आ जाने से नाटक सशक्त हो पाता है। कोई भी, दो चरित्र जब आपस में मिलते हैं तो विचारों के आदान-प्रदान में टकरहट होती है। रंगमंच में कभी भी यथास्थिति को स्वीकार नहीं किया जाता। वर्तमान में स्थिति के प्रति असंतोष का शव, छटपटाहट, प्रतिरोध और अस्वीकार जैसे नकारात्मक तत्त्वों के समावेश से ही नाटक सशक्त बनता है।

प्रश्न 5.नाटक में शब्द-चयन का महत्व बताइए।
उत्तर :
नाटक का महत्वपूर्ण अंग है-शब्द। वैसे तो यह सभी विधाओं के लिये आवश्यक है परन्तु नाटक में शब्द का विशेष महत्व है। नाटक की दुनिया में शब्द अपना अलग और विशेष रूप ग्रहण करता है, बोले जाने वाले शब् को नाटक का शरीर कहा गया है। एक अच्छे नाटककार को कम शब्दों में अपनी भावना और विचारों को व्यक्त कर की कला आनी चाहिये।

प्रश्न 6.कहानी क्या है?
उत्तर :

कहानी साहित्य की एक ऐसी विधा है जो अपने ही सीमित क्षेत्र में पूर्ण, स्वतंत्र एवं प्रभावशाली है। कहमी की यही विशेषता है कि इसमें एक मानव के जीवन की किसी प्रमुख घटना का वर्णन होता है। समय-समय पर अलंग-अलग विद्वानों ने कहानी की अलग-अलग परिभाषाएँ दी हैं। प्रेमचन्द के अनुसार, "कहानी एक रचना है, जिसमें जीवन के किसी अंग, किसी एक मनोभाव को प्रदर्शित करना ही लेखक का उद्देय होता है। उसका चरित्र, उसकी शैली तथा कथा विन्यास सब उसी भाव की पुष्टि करते हैं।"

प्रश्न 7.कहानी-लेखन के विभिन्न विषय लिखिए।
उत्तर :
कहानियाँ लिखने के लिये अनेक विषय हैं जिन पर लेखक कहानी लिख सकता है। ये वास्तविक घनाएँ या किस्से भी हो सकते हैं और काल्पनिक घटनाएँ भी हो सकती हैं जिनका हमारे वास्तविक जीवन से कोई सबन्ध नहीं होता है। प्रायः कहानी किसी घटना, युद्ध, प्रतिशोध के किस्से अथवा पौराणिक और ऐतिहासिक घटनाएँ भी हो सकती हैं।

प्रश्न 8.कहानी की परिभाषा देते हुए बताइए कि कहानी का मानव जीवन से क्या संबंध है?
उत्तर :
परिभाषा - किसी घटना, पात्र या समस्या की क्रमबद्ध जानकारी प्रस्तुत करना जिसमें परिवेश, द्वन्द्वामकता का भी समावेश हो तथा चरम उत्कर्ष का बिन्दु हो, उसे कहानी कहा जा सकता है।
जीवन से संबंध - सदैव से कहानी मानव जीवन का प्रमुख हिस्सा रही है। प्रत्येक व्यक्ति किसी-न-किसी रूप में कहानी सुनना-सुनाना पसंद करता है। प्रत्येक मनुष्य में अपने अनुभव बाँटने और दूसरों के अनुभवों को जाने की प्राकृतिक इच्छा होती है।

प्रश्न 9.कहानी का इतिहास कितना पुराना है? लिखिए।
उत्तर :
कहानी का इतिहास उतना ही पुराना है जितना मानव का इतिहास क्योंकि कहानी मानव स्वभाव या प्रकृति का हिस्सा है। कथा-वाचक कहानियाँ सुनाते थे। कहानी में घटना, युद्ध, प्रेम, प्रतिशोध के किस्से सुनाए जते थे। मानव स्वभाव का एक गुण कल्पना भी है। अतः सच्ची घटनाओं पर आधारित कथा-कहानी सुनाते-सुनाते उसमें कल्पना को जोड़ा जाने लगा क्योंकि प्रायः मनुष्य वही सुनना चाहता है जो उसे पसन्द है। हम कहानी के नाक की हार पसन्द नहीं करते। अतः सुनाने वाला अपनी कल्पना शक्ति के आधार पर नायक के गुणों का बखान करता है।

प्रश्न 10.कहानी विधा शिक्षा देने का प्रबल माध्यम है। कैसे?
उत्तर :
इस कारण प्राचीनकाल से ही धर्म प्रचारकों ने अपने सिद्धान्त और विचार लोगों तक पहुँचाने के लिए कहानी का सहारा लिया। यही नहीं, शिक्षा देने के लिये भी कहानी विधा का प्रयोग किया जाने लगा। इसका सबसे अच्छा उदाहरण पंचतंत्र की कहानियाँ हैं। इस तरह प्राचीनकाल से ही कहानी के साथ 'उद्देश्य' का सम्मिश्रण हो गया। आगे चलकर इसका और विकास हुआ।

प्रश्न 11.कहानी की मौखिक परंपरा पर टिप्पणी लिखिए।
उत्तर :
हमारे देश में मौखिक कहानी की परंपरा बहुत पुरानी है और आज तक प्रचलित है। खासतौर से राजस्थान

में आज भी यह परंपरा जीवित है। प्राचीनकाल से ही कहानी संचार का लोकप्रिय माध्यम रहा है। इसलिए मौखिक पसरा चलती रही। धर्म प्रचारकों ने भी कहानी को ही अपना माध्यम बनाया। शिक्षा का माध्यम भी कहानी ही थी। जैसे- पंचतंत्र की कहानियाँ बहुत शिक्षाप्रद हैं। 'उद्देश्य' का समावेश शुरू से ही हो गया, जो आगे चलकर और विवसित हुआ।

प्रश्न 12.कहानी में कथानक का महत्व बताइए।
उत्तर :
कथानक - कहानी का केन्द्रबिन्दु कथानक होता है। इस प्रकार कथानक कहानी का वह संक्षिप्त रूप है जिसमें प्रारम्भ से अन्त तक कहानी की सभी घटनाओं और पात्रों का उल्लेख किया गया हो। कथानक में तीन स्थितियाँ होती हैं, प्रारंभ, मध्य और अन्त। कथानक आगे बढ़ता है तो उसमें द्वन्द्व तत्त्व भी होता है। द्वन्द्व का अर्थ है गाधा। द्वन्द्व कहानी को रोचकता प्रदान करता है। |

प्रश्न 13.कथानक की पूर्णता की आवश्यक शर्त क्या है?
उत्तर :
कथानक की पूर्णता की आवश्यक शर्त यही है कि एक बाधा के समाप्त होने या किसी निष्कर्ष पर पहुँच जने के कारण कथानक पूरा हो जाये। कहानी नाटकीय रूप से अपने उद्देश्य को पूरा करने के पश्चात् समाप्त हो जाये। कहानी में अंत तक रोचकता बनी रहनी चाहिए और कथानक में द्वन्द्व के कारण ही यह रोचकता बनी रहती है।

प्रश्न 14.देशकाल और पात्र कहानी के विकास में क्या योगदान देते हैं? लिखिए।
उत्तर :
देशकाल - कथानक का स्वरूप बन जाने के बाद कहानीकार कथानक के देशकाल को पूरी तरह समझ लेत है क्योंकि कहानी की प्रामाणिकता और रोचकता के लिए यह बहुत आवश्यक तत्त्व है। देश का अर्थ है स्थान तथा कार का अर्थ है समय। कथानक के घटित होने का स्थान और समय ही देशकाल है।

पात्र - कहानीकार के मन में अपने पात्रों के स्वरूप की स्पष्ट छवि होनी चाहिए तभी वह अपने पात्रों का चरि-चित्रण करने में तथा संवाद लिखने में सफल हो सकता है।

प्रश्न 15.संवाद और क्लाइमेक्स (चरमोत्कर्ष) कहानी के अनिवार्य तत्व हैं। कैसे?
उत्तर :
संवाद - संवाद के बिना पात्रों की कल्पना मुश्किल है। संवाद ही कहानी को, पात्र को स्थापित करते हैं, विकसित करते हैं और कहानी को गति प्रदान करते हैं। अतः कहानी में पात्रों द्वारा बोले गए संवादों का महत्त्वपूर्ण स्थान होता है। संवाद विश्वासों, आदर्शों और स्थितियों के अनकल हों। संवाद संक्षिप्त हों. लम्बे लम्बे-लम्बे संवाद उबाऊ हो जाते है।
चरमोत्कर्ष (क्लाइमेक्स) - कहानी को धीरे-धीरे चरमोत्कर्ष की ओर बढ़ाना चाहिए। इसे कहानी का क्लाइमेक्स भी कहते हैं। चरमोत्कर्ष पाठक को स्वयं सोचने और लेखक के उद्देश्य को समझने की प्रक्रिया के द्वारा प्राप्त होना चाहिए।

प्रश्न 16."नाटक दृश्य-शृव्य काव्य है।" स्पष्ट कीजिए।
उत्तर :

नाटक को दृश्य काव्य कहा गया है। उसे रंगमंच पर प्रस्तुत किया जाता है और दर्शक उसको देखकर उसका आनन्द लेते हैं। नाटक के प्रस्तुतीकरण में अभिनेता द्वारा बोले गये संवाद तथा संगीत की ध्वनियों का भी योगदान महत्त्वपूर्ण होता है। इनको सुनकर इनका रस मिलता है। इस तरह नाटक दृश्य-श्रव्य काव्य है।

प्रश्न 17.कथानक में द्वन्द्व का अधिक महत्व है? स्पष्ट कीजिए।
उत्तर :
कथानक के बनियादी तत्त्वों में द्वन्द्र का महत्व बहत अधिक है। द्वन्द्व ही कथानक को आगे बढ़ाता है। कहानी में द्वन्द्व दो विरोधी तत्त्वों का टकराव या किसी की खोज में आने वाली बाधाओं, अन्तर्द्वद्व आदि के कारण पैदा होता है। कहानीकार अपने कथानक में द्वन्द्व के बिन्दुओं को जितना उन्नत रखेगा, कहानी भी उतनी ही सफलता से आगे बढ़ेगी।

प्रश्न 18.कहानी, कविता श्रव्य काव्य हैं। विवेचना कीजिए।
उत्तर :
कहानी, कविता श्रव्य काव्य हैं। इनका आनन्द पढ़कर तथा सुमकर लिया जा सकता है। श्रव्य माध्यम में किसी घटना को होते हुये दिखाया नहीं जा सकता है। वहाँ केवल उसका वर्णन किया जा सकता है। किसी व्यक्ति के सुख या दुःख को उसके हावभावों द्वारा प्रदर्शित नहीं किया जा सकता है। श्रोता को उसकी आवाज से ही उसके सुख-दुःख का परिचय दिया जा सकता है। किसी घटना का चित्रण पात्रों के आपसी संवादों के सहारे ही किया जा सकता है।

प्रश्न 19.रेडियो नाटक की अवधि और पात्र के बारे में लिखिए।
उत्तर :
रेडियो नाटक की अवधि आमतौर पर 15 मिनट से 30 मिनट की होती है। इससे अधिक नहीं क्योंकि श्रोता अधिक लम्बी अवधि तक स्वयं को एकाग्र नहीं रख पाता। यदि रेडियो नाटक लम्बा होता है तो उसे धारावाहिक के रूप में पेश किया जाता है। प्रत्येक धारावाहिक की अवधि भी 15 से 30 मिनट ही होती है। रेडियो नाटक की अवधि छोटी होने के कारण उसमें पात्रों की संख्या भी अधिक नहीं होती। पन्द्रह मिनट के नाटक में पात्र संख्या अधिकतम 5-6 हो सकती है। जरूरत के अनुसार यह संख्या 7-8 तक बढ़ भी सकती है।

प्रश्न 20.कहानी के कथानक का महत्व बताइए।
उत्तर :
जिस प्रकार मकान बनाने से पहले घर का नक्शा बनवाया जाता है फिर उसका निर्माण कराया जाता है ठीक उसी प्रकार कहानी का कथानक आमतौर पर किसी घटना, जानकारी, अनुभव या कल्पना पर आधारित होता है। यह घटना, जानकारी या अनुभव कहानीकार के मन में कल्पना के आधार पर अंकित हो जाता है। कल्पना के विस्तार हेतु कहानीकार के पास जो सूत्र होता है उसी के माध्यम से कल्पना का विकास होता है।

ख) "भक्तिन" पाठ के सभी प्रश्नोत्तर कॉपी में लिखें।

3. **MATHS**

1. The value of $\tan^{-1}(\sqrt{3})+\cos^{-1}\left(-\frac{1}{2}\right)$ corresponding to principal branches is

(a) $-\frac{\pi}{12}$ (b) 0 (c) π (d) $\frac{\pi}{3}$

2. The value of $\sin^{-1}\left(\cos\frac{\pi}{9}\right)$ is

(a) $\frac{\pi}{9}$ (b) $\frac{5\pi}{9}$ (c) $\frac{-5\pi}{9}$ (d) $\frac{7\pi}{18}$

3. The domain of the function defined by $\sin^{-1}\sqrt{x-1}$ is

(a) [1, 2] (b) [–1, 1] (c) [0, 1] (d) none of these

4. The value of $\tan^2(\sec^{-1}2)+\cot^2(\text{cosec}^{-1}3)$ is

(a) 5 (b) 11 (c) 13 (d) 15

5. The value of $\tan^{-1}\left(\sin^{-1}\frac{3}{5}+\tan^{-1}\frac{3}{4}\right)$ is

(a) $\frac{7}{24}$ (b) $\frac{24}{7}$ (c) $\frac{3}{2}$ (d) $\frac{3}{4}$

6. Find the value of $\sin^{-1}\left(\cos\left(\frac{33\pi}{5}\right)\right)$

7. Find the domain of $\sin^{-1}(x^2-4)$

8. Find the value of $\sin^{-1}\left(\sin\left(\frac{13\pi}{7}\right)\right)$

9. Find the values of $\tan^{-1}(1)+\cos^{-1}\left(-\frac{1}{2}\right)+\sin^{-1}\left(-\frac{1}{2}\right)$

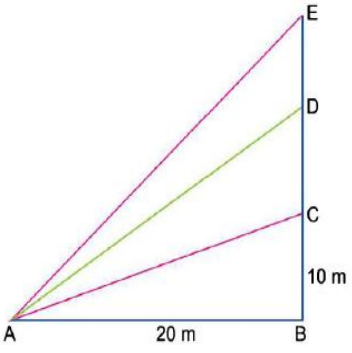
10. Express $\tan^{-1}\left(\frac{\cos x}{1-\sin x}\right), -\frac{\pi}{2}<x<\frac{\pi}{2}$ in the simplest form.

11. The Government of India is planning to fix a hoarding board at the face of a building on the road of a busy market for awareness on COVID-19 protocol. Ram, Robert and Rahim are the three engineers who are working on this project. "A" is considered to be a person viewing the hoarding board 20 metres away from the building, standing at the edge of a pathway nearby. Ram, Robert and Rahim suggested to the firm to place the hoarding board at three different locations namely C, D and E. "C" is at the height of 10 metres from the ground level. For the viewer A, the angle of elevation of "D" is double the angle of elevation of "C" The angle of elevation of "E" is triple the angle of elevation of "C" for the same viewer. Look at the figure given and based on the above information answer the following:

Based on the above information, answer the following questions:

(i) Find the measure of $\angle DAB$

(ii) Find the measure of $\angle EAB$



12 . If A is a square matrix such that $A^2 = A$, then (I

(*a*) I (*b*) $2A$ (c) $3I$ (*d*) A

13. The diagonal elements of a skew symmetric ma

(*a*) all zeroes (*b*) are all equal to so

(*c*) can be any number (*d*) none of these

14 .A is a skew-symmetric matrix and a matrix B such that B'AB is defined, then B'AB is a:

(a) symmetric matrix (b) skew-symmetric matrix

(c) Diagonal matrix (d) upper triangular symmetric

15. If $A = \begin{bmatrix} 5 & x \\ y & 0 \end{bmatrix}$ and $A = A'$ then

(*a*) $x = 0, y = 5$ (*b*) $x = y$ (*c*) $x + y = 5$ (*d*) $x - y = 5$

A statement of assertion (A) is followed by a statement of reason (R). Choose the correct answer out of the following choices.

(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.

15 **Assertion (A):** Let $A = \begin{bmatrix} 1 & 4 \\ 2 & 5 \\ 4 & 7 \end{bmatrix}$ and $B = \begin{bmatrix} 4 & 3 & 6 \\ 7 & 8 & 9 \\ 5 & 1 & 2 \end{bmatrix}$, then the product of the matrices A and B is not defined.

Reason (R): The number of rows in B is not equal to number of columns in A.

16. Find the value of a, b, c and d from the equation: $\begin{bmatrix} a-b & 2a+c \\ 2a-b & 3c+d \end{bmatrix} = \begin{bmatrix} -1 & 5 \\ 0 & 13 \end{bmatrix}$

17 **Assertion (A):** The matrix $A = \begin{bmatrix} 0 & -1 & -2 \\ 1 & 0 & -3 \\ 2 & 3 & 0 \end{bmatrix}$ is a skew symmetric matrix.

Reason (R): For the given matrix A we have A' = A.

18. Express the matrix $B = \begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ as the sum of a symmetric and a skew symmetric matrix.

19. Given $A = \begin{bmatrix} 1 & -1 & 0 \\ 2 & 3 & 4 \\ 0 & 1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 2 & 2 & -4 \\ -4 & 2 & -4 \\ 2 & -1 & 5 \end{bmatrix}$, verify that BA = 6I, how can we use the result to find the values of x, y, z from given equations x – y = 3, 2x + 3y + 4z = 17, y + 2z = 17

20. A trust invested some money in two types of bonds. The first bond pays 10% interest and second bond pays 12% interest. The trust received Rs. 2800 as interest. However, if trust had interchanged money in bonds, they would have got Rs. 100 less as interest. Using matrix method, find the amount invested by the trust. Interest received on this amount will be given to Helpage India as donation.

21. If A is a square matrix such that A2 = I then find the simplified value of $(A - I)^3 + (A + I)^3 - 7I$.

22.In a legislative assembly election, a political group hired a public relations firm to promote its candidate in three ways: telephone, house calls and letters. The cost per contact (in paise) is given in matrix A as

A= 40 Telephone
50 house call
100 letters

The number of contacts of each type made in two cities X and Y is given by B.

$$B=\begin{matrix}\text{telephone} & \text{house calls} & \text{letters}\\ \begin{bmatrix}1000 & 500 & 5000\\ 3000 & 1000 & 10000\end{bmatrix} & & \begin{matrix}X\\Y\end{matrix}\end{matrix}$$

Find the total amount spent by the group in two cities X and Y.

23.If one given matrix A is both symmetric and also skew-symmetric, then find A.

24. What possible orders can a matrix have if it has 24 elements?

25. Prove that the principal diagonal of any skew symmetric matrix is zero.

26. Two schools A and B want to award their selected students on the values of Honesty, Hardwork and Punctuality. The school A wants to award Rs. x each, Rs. y each and Rs. z each for the three respective values to its 3, 2 and 1 students respectively with a total award money of Rs.2200.

School B wants to spend Rs.3100 to award its 4, 1 and 3 students on the respective values. The total amount of award for one prize on each value is Rs.1200. Convert this problem in matrix form.

27.Two farmers Ankit and Girish cultivate only three varieties of pulses namely Urad, Masoor and Mung. The sale (in Rs.) of these varieties of pulses by both the farmers in the month of

September and October are given by the following matrices A and B.

(i) Find the combined sales of Masoor in September and October, for farmer Girish. [1]

(ii) Find the combined sales of Urad in September and October, for farmer Ankit. [1]

(iii) Find a decrease in sales from September to October. [2]

OR

(iii) If both the farmers receive 2% profit on gross sales, then compute the profit for each farmer

and for each variety sold in October. [2]

$$A=\begin{matrix}\begin{matrix}Urad & Masoor & Mung\end{matrix}\\ \begin{pmatrix}10000 & 20000 & 30000\\ 50000 & 30000 & 10000\end{pmatrix}\end{matrix}\begin{matrix}\\Ankit\\Girish\end{matrix}$$

October sales (in Rs.)

$$B=\begin{matrix}\begin{matrix}Urad & Masoor & Mung\end{matrix}\\ \begin{pmatrix}5000 & 10000 & 6000\\ 20000 & 30000 & 10000\end{pmatrix}\end{matrix}\begin{matrix}\\Ankit\\Girish\end{matrix}$$

If A and B are symmetric matrices, show that AB is symmetric, if AB=BA.

Let $A=\begin{bmatrix}1 & 2\\ -1 & 3\end{bmatrix}$ $B=\begin{bmatrix}4 & 0\\ 1 & 5\end{bmatrix}$ then show that $(AB)' = B'A'$.

4.	**BIOLOGY**	1. (a) Explain the process of the development of a male gametophyte in an angiosperm. (b) Why is it called a male gametophyte? 2. Draw a diagram of a matured microspore of an angiosperm. Label its cellular components onl y. 3. Why are angiosperm anthers called dithecous? Describe the structure of its microsporangium. 4. A mature embryo sac in flowering plant may possess 7-cells, but 8-nuclei. Explain with the help of diagram only. 5. (a) Draw a L.S. of pistil showing pollen tube entering into the embryo sac. Label the following: (i) Nucellus (ii) Antipodals (iii) Synergids (iv) Micropyle 6. Where does the process of megasporogenesis start in an angiosperm? Describe the process upto the formation of embryo sac. 7. Name the part of the flower which the tassels of the corn-cob represent. 8. Mention the advantages of emasculation and bagging in artificial hybridisation in plants bearing unisexual and bisexual flowers. 9. Express the process of pollination in Vallisneria. 10. What is cleistogamy? Write one advantage and one disadvantage of it, to the plant. 11. List the different types of pollination depending upon the source of pollen grain. 12. Angiosperms bearing unisexual flowers are said to be either monoecious or dioecious. Explain with the help of one example of each. 13. One of the major approaches of crop improvement programme is artificial hybridisation. Explain the steps involved in making sure that only the desired pollen grain pollinate the stigma of a bisexual flower by a plant breeder. 14. (a) Describe any two devices in a flowering plant which prevent both autogamy and geitonogamy. (b) Explain the events upto double fertilisation after the pollen tube enters one of the synergids in an ovule of an angiosperm. 15. Write the difference between the tender coconut water and the thick white kernel of a mature coconut and their ploidy. 16. a) Draw a diagram of a fully developed embryo sac of an angiosperm. Label its chalazal end and any other five parts within the embryo sac. (b) Why does the development of an endosperm precede that of the embryo in angiosperm? c) Number of chromosomes in an onion plant cell is 16. Name the cells of the embryo sac having 16 and 24 chromosomes formed after fertilisation. 17. Draw a labelled diagram of a matured embryo of a dicotyledonous plant. 18. Banana crop is cultivated by farmers without sowing of seeds. Explain how the plant is propagated. 19. A flower of tomato plant following the process of sexual reproduction produces 200 viable seeds. Answer the following questions giving reasons. (a) What would have been the minimum number of ovules present in per pollinated pistil? (b) How many microspore mother cells would minimally be required to produce requisite number of pollen grains? (c) How many pollen grains must have minimally pollinated the carpel? (d) How many male gametes would have used to produce these 200 viable seeds? (e) How many megaspore mother cells were required in this process? 20. a) Why are seeds of some grasses called apomictic? Explain. b) State two reasons to convince a farmer to use an apomictic crop. 21. a) When a seed of an orange is squeezed, many embryos, instead of one are observed. Explain how it is possible. b) Are these embryos genetically similar or different? Comment.

5.	**PHYISCS**	**MCQs** 1. Two charges q_1 and q_2 are placed at the centres of two spherical conducting shells of radius r_1 and r_2 respectively. The shells are arranged such that their centres are d [> (r_1+r_2)] distance apart. The force on q_2 due to q_1 is (a) $(1/4\Pi\ \varepsilon_0)\ q_1q_2/d^2$ (b) $(1/4\Pi\ \varepsilon_0)\ q_1q_2/(d-r_1)^2$ (c) Zero (d) $(1/4\Pi\ \varepsilon_0)\ q_1q_2/[d-(r_1-r_2)]^2$ 2. When a negative charge (-Q) is brought near one face of a metal cube, the (a) cube becomes positively charged (b) cube becomes negatively charged. (c) face near the charge becomes positively charged and the opposite face becomes negatively charged. (d)face near the charge becomes negatively charged and the opposite face becomes positively charged. 3. Let F_1 be the magnitude of the force between two small spheres, charged to a constant potential in free space and F_2 be the magnitude of the force between them in a medium of dielectric constant K, Then F_1/F_2 is (a) 1/K (b) K (c) K_2 (d) 1/ K_2 4. A charge Q is placed at the centre of the line joining two charges q and q. The system of the three charges will be in equilibrium if Q is (a) q/3 (b) − q/3 (c) q/4 (d) − q/4 5. A point charge situated at a distance r from a short electric dipole on its axis, experience a force F. If the distance of the charge is 2r, the force on the charge will be (a) F/16 (b) F/8 (c) F/4 (d) F/2 6. The magnitude of the electric field due to a point charge, object at a distance of 4m is 9 N/C. From the same charged object the electric field of magnitude, 16 N/C will be at a distance of (a) 1m (b) 2m (c) 3m (d) 6m 7. An isolated point charge particle produces an electric field E at a point 3m away from it. The distance of the point at which the field is E/4 (a)2m (b) 3m (c) 4m (d) 6m 8. Which one of the following is not a scalar quantity ? (a)Electric field (b) Voltage (c) Resistivity (d) Power 9. An electric dipole of length 2cm is placed at an angle of 30˚ with an electric field of $2x10^5$

N/C. If the dipole experiences a

torque of 8×10^{-3} Nm, the magnitude of either charge of the dipole , is

(a) 4 Mc (b) 7 μC (c) 8 mC (d) 2mC

10. An electric dipole placed in a non-uniform electric field will experience

(a) Only a force (b) only a torque (c) both force and torque (d) neither force nor torque

ASSERSION- REASON QUESTIONS

Two statements are given-one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below

A) Both A and R are true and R is the correct explanation of A

B) Both A and R are true and R is NOT the correct explanation of A

C) A is true but R is false

D) A is false and R is also false.

11. Assertion: The charge on anybody can be increased or decreased in terms of e.

Reason: Quantization of charge means that the charge on a body is the integral multiple of e.

12. Assertion : A Charge, which is less than charge of one electron is not possible

Reason : Charge is quantized.

13. Assertion: The properties that the force with which two charges attract or repel each other are not affected by the presence of a third charge.

Reason: Force on any charge due to a number of other charges is the vector sum of all the forces on that charge due to other charges, taken one at a time.

14. Assertion(A) : A metallic shield in the form of a hollow shell, can be built to block an electric field.

Reason(R): In a hollow spherical metallic shell, electric field inside is zero at every point.

15. Assertion: Coulomb force is the dominating force in the universe.

Reason: Coulomb force is weaker than the gravitational force.

16. Assertion (A): The range of gravitational force and coulomb force is infinity.

Reason(R): The Coulomb force is stronger than the gravitational force.

17. Assertion (A): The range of gravitational force and coulomb force is infinity.

Reason(R): The Coulomb force is stronger than the gravitational force.

18. Assertion (A): Positive electric flux indicates that electric lines of force are directed outwards

Reason (R): Positive electric flux is due to a positive charge.

19. Assertion (A): Electric field inside a metallic charged conductor is always zero whatever of amount of charge.

Reason (R): Electric field lines are always perpendicular to surface of the metal.

20. Assertion (A): Charge on a body is 2.3×10^{-19}C is not possible.

Reason (R): Electric charge on a body is quantized and integral multiple of charge of an

electron.

2 MARKS QUESTIONS

21 An attractive force of 5N is acting between two charges of +2.0 μC & -2.0 μC placed at some distance. If the charges are mutually touched and placed again at the same distance, what will be the new force between them?

22. A spherical balloon carries a charge that is uniformly distributed over its surface. As the balloon is blown up and increases in size, how does the total electric flux coming out of the surface change? Give reason

23. Two point charges placed at a distance r in air exert a force F on each other. At what distance will these charges experience the same force F in a medium of dielectric constant k?

24. A force F is acting between two charges placed some distance apart in vacuum. If a brass rod is placed between these charges, how does the force change?

25. Define electric lines of force and give its two important properties

3 MARKS QUESTIONS

26. An electric dipole is held in a uniform electric field.

(i)Using suitable diagram, show that it does not undergo any translator motion.

(ii)Derive an expression for the torque acting on it and specify its direction.

27. A charge is distributed uniformly over a ring of radius a. Obtain an expression for the electric intensity E a point on the axis of the ring. Hence show that for points at large distances from the ring, it behaves like a point charge.

28. A long charged cylinder of linear charge density λ_1 is surrounded by a hollow co-axial conducting cylinder of linear charge density $-\lambda_2$. Use Gauss's law to obtain expressions for the electric field at a point

(i) In the space between the cylinders.

(ii) Outside the larger cylinder.

29. (a) State Gauss's law. Using this law, obtain the expression for the electric field due to an infinitely long straight conductor of linear charge density λ .

(b)A wire AB of length L has linear charge density λ = kx where x is measured from the end A of the wire. This wire is enclosed by a Gaussian hollow surface. Find the expression for the electric flux through the surface.

30. Two large parallel thin metallic plates are placed close to each other. The plates have surface charge densities of opposite signs and of magnitude 20 x 10^{-12} C/ m^2.Calculate the electric field intensity

(i) in the outer region of the plates

(ii) in the interior region between the plates

5 MARKS QUESTIONS

31. (a) Derive an expression for the electric field at any point on the axial line of an electric dipole.

(b)Two identical point charge q each are kept 2m apart in air. A third point charge Q of unknown magnitude and sign is placed on the line joining the charges such that the system remains in equilibrium. Find the position and nature of Q.

32. (a) Derive an expression for the electric field E due to a dipole of length '2a'at a point distant r from the centre of the dipole on the axial line

(b) Draw a graph of E versus r for r>>a.

(c) If this dipole were kept in a uniform external electric field E_o diagrammatically represent the position of the dipole in stable and unstable equilibrium and write the expressions for the torque acting on the dipole in both the cases.

33 .(i) Use Gauss's law to obtain the expression for the electric field due to an infinitely long thin straight wire with uniform linear charge density λ .

(ii)An infinitely long positively charged straight wire has a linear charge density λ . An electron is revolving in a circle v with a constant speed v such that the wire passes through the centre, and is perpendicular to the plane, of the circle. Find the kinetic energy of the electron in terms of magnitudes of its charge and linear charge density λ on the wire.

(iii) Draw a graph of kinetic energy as a function of linear charge density λ .

6.	**CHEMISTRY**	1.Which of the following cannot be made by using Williamson's synthesis process? (a) Methoxy benzene (b) tert-butyl ethyl ether (c) allyl methyl ether (d) Di-tert-butyl ether 2.Amongst the following alcohols which would react fastest with conc. HCl and $ZnCl_2$? (a) pentan-1-ol (b) 2-methyl butan-1-ol (c) pentan-2-ol (d) 2-methyl butan-2-ol 3.Heating of phenyl methyl ether with HI produces: (a) Iodobenzene (b) phenol (c) benzene d (d) ethyl chloride 4.The alcohol which is also known as wood spirit is: (a) Methanol (b) Ethanol (c) Propanol (d) Butanol 5.Find out correct order of acidic strength among the following: (a)Ethanol>Water>Phenol (b)Ethanol<Water<Phenol (c)Water<Ethanol<Phenol (d)Phenol>ethanol=Water 6.Which of the following will not be soluble in $NaHCO_3$? (a) 2,4,6 trinitrophenol (b) Benzoic acid (c) o- Nitrophenol (d) Benzene sulphonic acid 7.Which of the following reagents may be used to distinguish between phenol and benzoic acid? (a) Neutral $FeCl_3$ (b) Aqueous NaOH (c) Tollen's reagent (d) Molisch reagent 8.The product formed in the following reaction will be: (a) Benzaldehyde (b) Benzene (c) Benzoquinone (d) Benzoic acid 9.Which of the following has lowest boiling point? (a) p-Nitrophenol (b) m-Nitrophenol (c) o-Nitrophenol (d) Phenol 10.Rate of dehydration of alcohols follows the order: (a) $2° > 1° > CH_3OH > 3°$ (b) $3° > 2° > 1° > CH_3OH$ (c) $2° > 3° > 1° > CH_3OH$ (d) $CH_3OH > 1° > 2° > 3°$ 11.Phenol on heating with CHCl3 and NaOH gives salicylaldehyde. The reaction is called: (a) Reimer-Tiemann reaction (b) Gatterman-Koch reaction (c) Cannizzaro's reaction (d) Hell-Volhard-Zelinsky reaction

2.Which of the following is a secondary alcohol?

(a) 2-methylbutan-2-ol (b) 3-methylbutan-1-ol (c) 2-methylbutan-1-ol (d) 3- methylbutan-2-ol

13.When salicylic acid is heated with Zn dust, the main product formed will be:

(a) Benzene (b) phenol (c) Toluene (d) Benzoic acid

14.Which of the following is used for denaturation of commercial alcohol?

(a) Copper sulphate (b) Pyridine (c) Methyl alcohol (d) All of the above

15.What is the product formed when phenol reacts with bromine water?

(a) White precipitate (b) Red precipitate (c) Blue precipitae(d) No precipitate

MCQ ….. HALO ALKANES AND ARENES

1.Which of the following is most reactive towards nucleophilic substitution reaction?

(a) C_6H_5Cl (b) $CH_2=CHCl$ (c) $ClCH_2CH=CH_2$ (d) $CH_3CH=CHCl$

2.The most reactive nucleophile among the following is

(a) CH_3O^- (b) $C_6H_5O^-$ (c) $(CH_3)_2CHO^-$ (d) $(CH_3)_3CO^-$

3.The main difference between C – X bond of a haloalkane and a haloarene is

(a) C – X bond in haloalkanes is shorter than haloarenes

(b) In haloalkanes the C attached to halogen in C – X bond is sp^3 hybridised while in haloarenes it is sp^2 hybridised.

(c) C – X bond in haloalkanes acquires a double bond character due to higher electronegativity of X than haloarenes.

(d) haloalkanes are less reactive than haloarenes due to difficulty in C – X cleavage in haloalkanes.

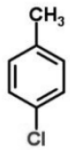
4.Which of the following is a primary halide?

(a) Isopropyl iodide

(b) Secondary butyl iodide

(c) Tertiary butyl iodide

5.Which is the correct IUPAC name for



(a) Methylchlorobenzene (b) Toluene (c) 1-Chloro-4-methylbenzene(d) 1-Methyl-4-chlorobenzene

6 Aryl halides are less reactive towards nucleophilic substitution reactions as compared to alkyl halides due to

(a) formation of a less stable carbonium ion in aryl halides

(b) resonance stabilization in aryl halides

(c) presence of double bonds in alkyl halides

(d) inductive effect in aryl halides

7.p-dichlorobenzene has higher melting point than its o- and m- isomers. Why?

(a) m- dichlorobenzene is more polar than o-isomer

(b) p-isomer has a symmetrical crystalline structure

(c) boiling point of o- isomer is more than p-isomers

(d) All of these are correct

8.Chlorobenzene on reaction with NaOH at 300K followed by acidic hydrolysis produces

(a) Phenol (b) Sodium phenoxide (c) Benzaldehyde (d) Benzoic acid

9.Which of the following is most reactive towards aqueous NaOH?

(a) C_6H_5Cl (b) $C_6H_5CH_2Cl$ (c) C_6H_5Br (d) BrC_6H_4Br

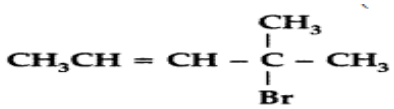
10.Which of the following haloalkanes is optically active?

(a) 1-Chloropropane (b) 1-Bromopropane (c) 1-Iodopropane (d) 1-Fluoropropane

QUESTIONS ;

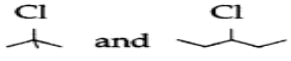
1.What happens when CH_3 — Br is treated with KCN?

2.Write the IUPAC name of

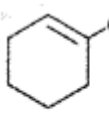


3.What happens when ethyl chloride is treated with aqueous KOH?

4.
Which compound in the following pair undergoes faster S_N1 reaction.



5Complete the following reaction equations

(i)  + HI ⟶

(ii) $CH_3CH_2CH = CH_2 + HBr \rightarrow$

6. How are the following conversions carried out?
(i) Benzyl chloride to benzyl alcohol,
(ii) Methyl magnesium bromide to 2-methyl- propan-2-ol
7.Haloalkanes undergo nucleophilic substitution whereas haloarenes undergo electrophilic substitution. Explain.

8. Chlorobenzene is extremely less reactive towards a nucleophilic substitution reaction. Give two reasons for the same.

9.(a) Why does p-dichlorobenzene have a higher m.p. than its o- and m-isomers?
(b) Why is (±)-Butan-2-ol optically inactive?

10.Write the structure of 2, 4-dinitrochlorobenzene.

11..Draw the structure of hex-l-en-3-ol compound
12.Ortho nitrophenol has lower boiling point than p-nitrophenol. Why?

13Ortho-nitrophenol is more acidic than ortho-methoxyphenol. Why?

14Give a chemical test to distinguish between 2-Pentanol and 3-Pentanol?

15Write the chemical reaction to explain Kolbe's reaction.

16.How would you obtain ethane-1, 2-diol from ethanol

17. How would you obtain acetophenone from phenol?

18How would you obtain phenol from benzene?

19.Give simple chemical tests to distinguish between the following pairs of compounds:
Benzoic acid and Phenol

20.llustrate the following reactions giving a chemical equation for each :
(i) Kolbe's reaction
(ii) Williamsons synthesis of an ether

21Explain the following reactions with an example for each :
(i) Reimer-Tiemann reaction
(ii) Friedel-Crafts reaction.

22How are the following conversions carried out?
(i) Propene to propan-2-ol
(ii) Ethylmagnesium chloride to propan-1-ol.

23How would you obtain
(i) Picric acid (2, 4, 6-trinitrophenol) from phenol,

		(ii) 2-Methylpropene from 2-methylpropanol? 24. Explain the following behaviours : (i) Alcohols are more soluble in water than the hydrocarbons of comparable molecular masses. (ii) Ortho-nitrophenol is more acidic than ortho-methoxyphenol. 25. Explain the mechanism of acid catalysed hydration of an alkene to form corresponding alcohol.
7.	**COMPUTER SCIENCE**	**1.Art Integrated Project** Project Title: "Digital Empowerment in Chhattisgarh" Make a digital presentation (PPT or Poster) highlighting how digital technology is being used in the state for development. **2. Assignments** **Objective Type Questions** I. Fill in the blanks: a) The type() function returns the __ of the object. b) Python uses __ typing, meaning the data type is automatically inferred. c) int(3.7) will return __. d) In Python, // is used for __ division. II. State True or False: a) Python is a statically typed language. __ b) print("5" + 3) will result in an error. __ c) Strings are immutable in Python. __ d) 2 ** 3 is the same as pow(2, 3). __ III. Multiple Choice Questions: a) Which of the following is a valid variable name? i. 2var ii. _name iii. my-name iv. while Answer: _____ b) What is the output of print(7 % 3)? i. 1 ii. 2 iii. 0 iv. 3 Answer: _____ c) Which operator is used for exponentiation in Python? i. ^ ii. ** iii. % iv. // Answer: _____ **Short Answer Questions** 1.What is the difference between = and == in Python? 2.What is type casting? Give an example. 3.List any four valid Python data types with examples. 4. Write the output of the following code: x = 5 y = 2 print(x // y, x / y, x % y)

		5. Write the difference between implicit and explicit type conversion. 6. What are literals in Python? Give examples. 7. Differentiate between input() and print() with examples. 8. Explain / vs // with examples. 9. Write the output of: a = 10 b = 3 print(a ** b) print(a % b) 10. Define a variable and explain how it is declared. 11. What are comments? Write single and multi-line comment examples. 13. Write the output of: a) '2' + '3' b) int('2') + int('3') c) '2' * 3 14. Explain dynamic typing with an example. 16. What are escape sequences? Give any two. 17. Write Python statements to: a) Calculate the square of a number b) Accept user input and display its data type 18. What is the purpose of id() function in Python? Give an example. 19. Explain memory management in variable assignment. 20. Difference between mutable and immutable types.
8.	**PHYSICAL EDUCATION**	1) Write a detailed note on the Organizing Committee formed by your school for conducting an Inter-School Football Tournament. Include the roles and responsibilities of each committee involved, such as: • Planning and Coordination Committee • Sports and Technical Committee • Hospitality Committee • Discipline and Security Committee • Publicity and Media Committee • First Aid and Medical Support Committee. Explain how each committee contributes to the smooth execution of the tournament. 2) Prepare a detailed project report on any one game of your choice.(Football, Volleyball, Badminton, Basketball, Cricket, kho-Kho , Kabaddi, Handball, Hockey)

9. **IT**

NOTE: 1. Write the questions in Practical copy.
2.Tables and images to be drawn/ written on the blank page.
3. Only 2 queries on 1 page.
4. Write in clear and neat handwriting.

Q1. Prepare a 5 slide presentation on:
a) Four parts of communication skills.
b) Stages of active listening.
(Take the small print out of slides and paste in blank side practical copy).

Q.2
Consider the following tables EMP and SALGRADE, write the query for (i) to (vi) and output for (vii) to (x)

TABLE: EMPLOYEE

ECODE	NAME	DESIG	SGRADE	DOJ	DOB
101	Vikrant	Executive	S03	2003-03-23	1980-01-13
102	Ravi	Head-IT	S02	2010-02-12	1987-07-22
103	John Cena	Receptionist	S03	2009-06-24	1983-02-24
105	Azhar Ansari	GM	S02	2009-08-11	1984-03-03
108	Priyam Sen	CEO	S01	2004-12-29	1982-01-19

TABLE: SALGRADE

SGRADE	SALARY	HRA
S01	56000	18000
S02	32000	12000
S03	24000	8000

(i) To display details of all employee in descending order of their DOJ
(ii) To display NAME AND DESIG of those employees whose sgrade is either 'S02' or 'S03'
(iii) To display NAME, DESIG, SGRADE of those employee who joined in the year 2009
(iv) To display all SGRADE, ANNUAL_SALARY from table SALGRADE [where ANNUAL_SALARY = SALARY*12]
(v) To display number of employee working in each SALGRADE from table EMPLOYEE
(vi) To display NAME, DESIG, SALARY, HRA from tables EMPLOYEE and SALGRADE where SALARY is less than 50000
(vii) Select MIN(DOJ), MAX(DOB) from employee;
(viii) Select SGrade,Salary+HRA from SalGrade where Sgrade='S02'
(ix) Select count(distinct sgrade) from employee
(x) Select sum(salary), avg(salary) from salgrade

Q.3
Write SQL queries for (i) to (iv) and find outputs for SQL queries (v) to (viii) which are based on tables

TABLE : ACCOUNT

ANO	ANAME	ADDRESS
101	Nirja Singh	Bangalore
102	Rohan Gupta	Chennai
103	Ali Reza	Hyderabad
104	Rishabh Jain	Chennai
105	Simran Kaur	Chandigarh

TABLE: TRANSACT

TRNO	ANO	AMOUNT	TYPE	DOT
T001	101	2500	Withdraw	2017-12-21
T002	103	3000	Deposit	2017-06-01
T003	102	2000	Withdraw	2017-05-12
T004	103	1000	Deposit	2017-10-22
T005	102	12000	Deposit	2017-11-06

		(i) To display details of all transactions of TYPE Withdraw from TRANSACT table (ii) To display ANO and AMOUNT of all Deposit and Withdrawals done in month of 'May' 2017 from table TRANSACT (iii) To display first date of transaction (DOT) from table TRANSACT for Account having ANO as 102 (iv) To display ANO, ANAME, AMOUNT and DOT of those persons from ACCOUNT and TRANSACT table who have done transaction less than or equal to 3000 (v) SELECT ANO, ANAME FROM ACCOUNT WHERE ADDRESS NOT IN ('CHENNAI', 'BANGALORE'); (vi) SELECT DISTINCT ANO FROM TRANSACT (vii) SELECT ANO, COUNT(*), MIN(AMOUNT) FROM TRANSACT GROUP BY ANO HAVING COUNT(*)> 1 (viii) SELECT COUNT(*), SUM(AMOUNT) FROM TRANSACT WHERE DOT <= '2017-10-01'
10.	**MARKETING**	**Answer the following questions. (1 Mark)** 1. This is the only element that generates revenue for an organisation and determines growth: (a) Price (b) Promotion (c) Place (d) Product 2. Which out of the following is not included in the components of a product? (a) Associated feature (b) Core product (c) Logo (d) Brand mark 3. Which 'P' is mostly used as a need-satisfying entity? (a) Price (b) Product (c) Promotion (d) Place 4. This unique ''P'' has its own identity or personality: (a) Product (b) Price (c) Place (d) Promotion 6. When diverse products belonging to same category are manufactured by a company but have different brand name are called: (a) Store brand (b) Family brand (c) Individual brand (d) Family brand 7. Which type of packaging was used to protect the product from damage en-route and to facilitate handling at various points of distribution? (a) Conventional packaging (b) branded packaging (c) Trendy packaging (d) All of these 8. It provides written information about the product helping the buyer to understand the nature of the product its distinctive features (a) Brand (b) Logo (c) Package (d) Label 9. A deliberate alteration in the physical attributes of a product or its packaging is called (a) Product Modification (b) Product differentiation (c) Product Diversification (d) Product repositioning 10. I bought a rail ticket from Delhi to Mumbai in Rajdhani Express but to my surprise I got travel insurance free worth ` 2lakh, in case of my death during the journey due to rail accident. Which benefit is highlighted in the above statement? (a) The potential product (b) Augmented product (c) The Customized product (d) Generic product 11. Very purpose for which product is created is it's..... Benefits (a) Core (b) Impulse (c) product (d) Customized 12. What out of these is contributing heavily to the economy all over the world? (a) Benefits (b) Products (c) Service (d) Utilities 13. Along with Producer based factors, few more factors that affect the selection of channel of Distribution are..... (a) Product based (b) Market based (c) Middlemen based (d) All of those 14. At the last moment while paying cash at the billing counter you bought a pack of cloth clips. This is an example of .....goods. (a) Impulse (b) The Customized (c) Augmented (d) Generic

		II. Long question Answer **1**. Jennifer is a regular shopper at Lulu Hypermarket. She visits the location for purchasing groceries, items of daily necessities, etc. Her son Jefferson, always observed that while at the billing counter, Jennifer would always add items to the cart which are not mentioned in the shopping list which she and her son prepared at home. From the above given case identify the type of products that Jennifer is purchasing at the last moment. Explain the identified type of product. 2. You launched a product. It is in 'Introduction Stage'. Which marketing strategies will be adopted by you during this stage? List the features of labelling. 3. What is the name of the set of marketing intermediaries called as per Kotler? 4. Name any two dimensions of product mix. 5. Products have their own identity & personality. Most of the users associate meaning with products which given them satisfaction. A customer never just purchases the core product but also needs much more than just the basic element of the product. Describe the other components of the product which contribute to making the 'total product offering'. Explain with the help of any four examples 6. You launched a product. It is in 'Introduction Stage.' Which marketing strategies will be adopted by you during this stage?
11.	**YOGA**	Q.1 Prepare a project file in around 10-15 pages on topic: a. Yoga for mental health **OR** b. Holistic approach of yoga for students.

May this vacation bring you lots of good memories. Happy summer vacation."