

**Important Instructions to examiners:**

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by the candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more Importance (Not applicable for subject English and Communication Skills.)
- 4) While assessing figures, the examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given stepwise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions, credit may be given by judgement on part of the examiner of relevant answer based on the candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on an equivalent concept.
- 8) As per the policy decision of Maharashtra State Government, teaching in English/Marathi and Bilingual (English + Marathi) medium is introduced at first year of AICTE diploma Programme from academic year 2021-2022. Hence if the students in first year (first and second semesters) write answers in Marathi or bilingual language (English +Marathi), the Examiner shall consider the same and assess the answer based on matching of concepts with model answer.

Q. No.	Sub No.	Answers	Marking Scheme
1		Answer any <u>SIX</u> of the following:	30M
1	a	Enlist various National Health Programmes implemented by Government of India. Explain in short Revised National Tuberculosis Contract Programme (RNTCP) and National Programme for Control of Blindness. Marking Scheme: Enlisting National Health Programs: 2M (Any 4), Explanation of RNTCP:1.5M, Explanation of National Programme for Control of Blindness:1.5M Answer: The various National Health Programmes implemented by Government of India are as follows- <ol style="list-style-type: none">1. National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS).2. National Programme for the Health Care for the Elderly (NPHCE)3. National Programme for Prevention & Management of Burn Injuries (NPPMBI)4. National AIDS Control Programme (NACP)5. National Leprosy Eradication Programme (NLEP)6. National Tobacco Control Programme (NTCP)7. National Programme on Climate Change & Human Health (NPCCHH)8. National Programme for the Health Care for the Elderly (NPHCE)	5M 2M (Any 4)



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Revised National Tuberculosis Contract Programme (RNTCP)</p> <p>The Government of India launched the National TB Programme (NTP) in 1962. After the declaration of TB as a global emergency by WHO, Government of India re-implemented NTP as Revised National TB Control Programme (RNTCP) in 1993.</p> <p>Objectives: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. To achieve a rapid decline in burden of TB, morbidity and mortality while working towards elimination of TB in India by 2025.2. Early diagnosis and treatment of TB.3. Find all Drug Sensitive (DSTB) TB cases and all Drug Resistant (DRTB) TB cases. <p>Functioning: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. Free diagnosis and treatment of TB patients.2. Testing of all TB patients for drug resistance and HIV.3. To improve the compliance of the TB patients to the treatment regimen, customized SMS services to the individual patients on a regular basis reminding them about the time to consume the drugs, started by The Ministry of Health & Family Welfare (MOHFW).4. Nutritional and financial assistance to TB patients. <p>Outcome: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. Some states and union territories have committed to end TB even before 2025.2. The availability of rapid molecular tests for patients referred by any private doctor or institute have notified about 24 lakh patients.3. About 94% of the people living with HIV are being screened for TB symptoms.4. In the year 2019, more than 3 lakh people living with HIV were initiated on TB preventative therapy.	1.5M
		<p>National Programme for Control of Blindness:</p> <p>National Programme for Control of Blindness and Visual Impairment (NPCB & VI) was launched in the year 1976 as a 100% centrally sponsored scheme (now 60:40 in all states and 90:10 in NE States) with the goal of reducing the prevalence of blindness to 0.3% by 2020.</p> <p>Objectives: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. To reduce the backlog of avoidable blindness through identification and treatment of curable blindness.2. To develop and strengthen the strategy of NPCB for “Eye Health for All” and prevention of visual impairment.	1.5M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>3. To enhance community awareness on eye care.</p> <p>4. Increase and expand research for prevention of blindness and visual impairment.</p> <p>Functioning: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. Set up of Multipurpose District Mobile Ophthalmic Units in the district hospitals of States and UTs2. Distribute free spectacles to old patients suffering from presbyopia.3. Strengthen the tertiary Eye-care centres by providing funds for purchase of sophisticated modern instruments. <p>Outcome: (Any 1 for 0.5M)</p> <ol style="list-style-type: none">1. Successful implementation of School Eye Screening Programmes.2. Eyes for corneal transplantation donated at a number above the set target.3. Treatment of Eye diseases like Glaucoma, diabetic retinopathy, childhood blindness etc, managed successfully.	
1	b	<p>Define 'Immunity' and explain National Immunization Schedule.</p> <p>Marking Scheme:</p> <p>Definition of Immunity -1M, National Immunization Schedule Explanation - 4M includes, Schedule for infants: 1.5M, Schedule for children: 1.5M Schedule for pregnant woman: 1M.</p> <p>Answer:</p> <p>Immunity:</p> <p>Immunity is defined as any means of host defences to prevent entry of the germ in body and/or recognize, destroy, and eliminate any foreign material to protect body against disease.</p> <p>OR</p> <p>The power of the body to resist the effects of invasion of pathogens is known as immunity.</p> <p>National Immunization Schedule:</p> <p>Each country has its own immunization schedule based on their local needs. The Indian version of National Immunization Schedule is to protect the children against six vaccine preventable diseases -Diphtheria, Whooping Cough, Tetanus, Polio, Tuberculosis, Measles.</p>	<p>5M</p> <p>1M</p> <p>4M</p>



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		<p>National Immunization Schedule (NIS) for Infants, Children and Pregnant Women.</p> <table border="1"> <thead> <tr> <th>Vaccine</th> <th>When to Give</th> <th>Dose</th> <th>Route</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">For Infants (1.5M for Any 3 Vaccines)</td> </tr> <tr> <td>Bacillus Calmette Guerin (BCG)</td> <td>At birth or as early as possible till one year of age</td> <td>0.1ml (0.05ml until 1 month age)</td> <td>Intradermal</td> </tr> <tr> <td>Hepatitis B – Birth dose</td> <td>At birth or as early as possible within 24 hours</td> <td>0.5 ml</td> <td>Intra-muscular</td> </tr> <tr> <td>Oral Polio Vaccine (OPV)-0</td> <td>At birth or as early as possible within the first 15 days</td> <td>2 Drops</td> <td>Oral</td> </tr> <tr> <td>OPV 1, 2 & 3</td> <td>At 6 weeks, 10 weeks & 14 weeks (OPV can be given till 5 years of age)</td> <td>2 Drops</td> <td>Oral</td> </tr> <tr> <td>Pentavalent 1, 2 & 3</td> <td>At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)</td> <td>0.5 ml</td> <td>Intra-muscular</td> </tr> <tr> <td>Rotavirus (RVV)</td> <td>At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)</td> <td>5 drops (liquid vaccine) 2.5 ml (lyophilized vaccine)</td> <td>Oral</td> </tr> <tr> <td>Inactivated Polio Vaccine (IPV)</td> <td>Two fractional doses at 6 and 14 weeks of age</td> <td>0.1 ml</td> <td>Intra dermal two fractional doses</td> </tr> <tr> <td>Measles Rubella (MR) 1st dose</td> <td>9 completed months-12 months. (Measles can be given till 5 years of age)</td> <td>0.5 ml</td> <td>Sub-cutaneous</td> </tr> <tr> <td>Vitamin A (1st dose)</td> <td>At 9 completed months with measles-Rubella</td> <td>1 ml (1 lakh IU)</td> <td>Oral</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="4" style="text-align: center;">For Children (1.5M for Any 3 Vaccines)</th> </tr> </thead> <tbody> <tr> <td>Diphtheria, Pertussis & Tetanus (DPT) booster-1</td> <td>16-24 months</td> <td>0.5 ml</td> <td>Intra-muscular</td> </tr> <tr> <td>MR 2nd dose</td> <td>16-24 months</td> <td>0.5 ml</td> <td>Sub-cutaneous</td> </tr> <tr> <td>OPV Booster</td> <td>16-24 months</td> <td>2 Drops</td> <td>Oral</td> </tr> <tr> <td>Vitamin A (2nd to 9th dose)</td> <td>16-18 months. Then one dose every 6 months up to the age of 5 years</td> <td>2 ml (2 lakh IU)</td> <td>Oral</td> </tr> <tr> <td>DPT Booster-2</td> <td>5-6 years</td> <td>0.5 ml</td> <td>Intra-muscular</td> </tr> <tr> <td>Td</td> <td>10 years & 16 years</td> <td>0.5 ml</td> <td>Intra-muscular</td> </tr> </tbody> </table>	Vaccine	When to Give	Dose	Route	For Infants (1.5M for Any 3 Vaccines)				Bacillus Calmette Guerin (BCG)	At birth or as early as possible till one year of age	0.1ml (0.05ml until 1 month age)	Intradermal	Hepatitis B – Birth dose	At birth or as early as possible within 24 hours	0.5 ml	Intra-muscular	Oral Polio Vaccine (OPV)-0	At birth or as early as possible within the first 15 days	2 Drops	Oral	OPV 1, 2 & 3	At 6 weeks, 10 weeks & 14 weeks (OPV can be given till 5 years of age)	2 Drops	Oral	Pentavalent 1, 2 & 3	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	0.5 ml	Intra-muscular	Rotavirus (RVV)	At 6 weeks, 10 weeks & 14 weeks (can be given till one year of age)	5 drops (liquid vaccine) 2.5 ml (lyophilized vaccine)	Oral	Inactivated Polio Vaccine (IPV)	Two fractional doses at 6 and 14 weeks of age	0.1 ml	Intra dermal two fractional doses	Measles Rubella (MR) 1 st dose	9 completed months-12 months. (Measles can be given till 5 years of age)	0.5 ml	Sub-cutaneous	Vitamin A (1 st dose)	At 9 completed months with measles-Rubella	1 ml (1 lakh IU)	Oral	For Children (1.5M for Any 3 Vaccines)				Diphtheria, Pertussis & Tetanus (DPT) booster-1	16-24 months	0.5 ml	Intra-muscular	MR 2nd dose	16-24 months	0.5 ml	Sub-cutaneous	OPV Booster	16-24 months	2 Drops	Oral	Vitamin A (2nd to 9th dose)	16-18 months. Then one dose every 6 months up to the age of 5 years	2 ml (2 lakh IU)	Oral	DPT Booster-2	5-6 years	0.5 ml	Intra-muscular	Td	10 years & 16 years	0.5 ml	Intra-muscular	
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1	c	<p>What are FIP development goals and elaborate on National Health Policy.</p> <p>Marking Scheme: FIP Development Goals - 2M; National Health Policy – 3M.</p> <p>Answer:</p> <p>FIP Development Goals: (Description: 0.5M, Any 3 Goals:1.5M)</p> <ul style="list-style-type: none"> International Pharmaceutical Federation (FIP) has set targets to meet national, regional, and global healthcare needs. The FIP Development Goals is a well-designed time bound initiative for pharmacy and its contribution to world health. 	<p>5M</p> <p>2M</p>																																		



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		<ul style="list-style-type: none">The FIP goals aims at –<ul style="list-style-type: none">Assessing and prioritizing national health situations.Educating and developing the workforce.Ensuring good practices.Promoting pharmaceutical innovations.There are 21 goals decided as core dimensions of FIP’s mission to ensure and promote practice, science, and education in Pharmacy.FIP development goals are the systematic and integrated approach to meet support objectives of the UN program “<i>Health For All</i>” through the development of the pharmaceutical workforce. Goal 1: Academic Capacity. Goal 2: Early Career Training Strategy Development. Goal 3: Quality Assurance. Goal 4: Advanced and Specialist Development. Goal 5: Competency Development. Goal 6: Leadership Development. Goal 7: Advancing Integrated Services. Goal 8: Working with others. Goal 9: Continuing Professional Development Strategies Goal 10: Equity and Equality Goal 11: Impact & Outcomes Goal 12: Pharmacy Intelligence. Goal 13: Policy development Goal 14: Medicines Experts.	Any three goals = 1.5M
		<p>National Health Policy: (<i>Explanation 2M, Objectives: 1M (Any two)</i>)</p> <p>The National Health Policy of 1983 and the National Health Policy of 2002 have served well in guiding the approach for the health sector in the Five-Year Plans.</p> <p>Now 20 years after the last health policy, the context has changed in four major ways.</p> <ul style="list-style-type: none">First, health priorities are changing. Although maternal and child mortality has rapidly declined, there is a growing burden on account of non-communicable diseases and some infectious diseases.The second important change is the emergence of a robust health care industry estimated to be growing at double-digit.	3M



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		<ul style="list-style-type: none">The third change is the growing incidences of catastrophic expenditure due to health care costs, which are presently estimated to be one of the major contributors to poverty.Fourth, rising economic growth enables enhanced fiscal capacity. Therefore, a new health policy responsive to these contextual changes is required. <p>The primary aim of the National Health Policy, 2017, is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions- investments in health, organization of healthcare services, prevention of diseases and promotion of good health through cross-sectoral actions, access to technologies, developing human resources, encouraging medical pluralism, building a knowledge base, developing better financial protection strategies, strengthening regulation and health assurance.</p> <p>Goal:</p> <p>The attainment of the highest possible level of health and wellbeing for all at all ages, through a preventive and promotive health care orientation in all developmental policies, and universal access to good quality health care services without anyone having to face financial hardship, therefore. This would be achieved through increasing access, improving quality, and lowering the cost of healthcare delivery.</p> <p>Objectives:</p> <ol style="list-style-type: none">Improvement in health status through preventive, promotive, curative, palliative and rehabilitative services provided through the public health sector with a focus on quality.Availability of free primary health care services for all infectious and non-infectious diseases.Access to affordable quality secondary and tertiary healthcare services through private-public partnerships in hospitals.Reinforce trust in the public health care system.Enhance life expectancy and quality of life for the population.	
1	d	<p>Give Causative agent, Clinical presentation, and role of Pharmacist in the following infections (any two).</p> <ol style="list-style-type: none">AIDSTyphoidCovid -19	5M



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		<p>Marking Scheme: Each disease / infection – 2.5 M</p> <p>Causative agent : ½ M</p> <p>Clinical presentation: 1M (for any two points)</p> <p>Role of Pharmacist: 1M (for any two points)</p> <p>Answer:</p> <p style="text-align: center;">i) AIDS:</p> <p>Causative agent: Retrovirus known as HIV (Human immunodeficiency virus)</p> <p>Clinical Presentations:</p> <ol style="list-style-type: none">i. Breakdown of body's immune system which ultimately leads to life threatening opportunistic infections, neurological disorders, and malignancies.ii. Weight lossiii. Fever or night sweating as well as chronic diarrhoea persisting for longer than one month.iv. Persistent cough and shortness of breath. <p>Role of Pharmacists in Education and Prevention:</p> <ol style="list-style-type: none">i. Pharmacists can educate the public about AIDS, its problems and methods of prevention to reduce the risk of infection before exposure.ii. Pharmacists can counsel people about using Post Exposure Prophylaxis (PEP) to reduce risk of HIV infection after exposure.iii. Pharmacists can educate people about the importance of having safe sex to prevent AIDS.iv. Pharmacist can educate the public about getting proper anti-retroviral treatment (ART) to prevent HIV transmission to sexual partners and from mother to child during pregnancy, delivery, and breast feeding. <p style="text-align: center;">ii) Typhoid.</p> <p>Causative agent: Salmonella typhi</p> <p>Clinical Presentations:</p> <ol style="list-style-type: none">i. Prolonged high fever.ii. Abdominal pain.iii. Headache.iv. Diarrhoea or constipation.	2.5M



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		<p>Role of Pharmacists in Education and Prevention:</p> <ol style="list-style-type: none">Pharmacists can educate people for sanitary measures like safe drinking water, food and personal hygiene.Pharmacists can promote Immunization with TAB vaccine containing S. typhi, S. paratyphi A and S. paratyphi B.Pharmacists can educate public about getting proper treatment with newer antibiotics such as Azithromycin.Pharmacists can make public aware of the importance of using proper sanitation. <p style="text-align: center;">iii) Covid – 19.</p> <p>Causative Agent: SARS-CoV-2 virus which is a +ssRNA virus having a crown-like appearance because spike glycoproteins are present on its envelope.</p> <p>Clinical Presentations:</p> <ol style="list-style-type: none">Cough and headache, Tiredness, and fever.Difficulty breathing or shortness of breath loss of speech or mobility, or confusion.Loss of taste or smell.Rash on the skin or discolouration of fingers or toes. <p>Role of Pharmacists in Education and Prevention:</p> <ol style="list-style-type: none">Pharmacists can encourage the public to get vaccinated and complete their dose schedules as COVID 19 vaccination is the most effective way to prevent the disease.Pharmacists can spread awareness about the importance of regular washing of hands and maintaining good personal hygiene.Pharmacists can educate the public about avoiding close contact with an infected person and self-isolation to prevent the spread of disease.Pharmacists can educate the public on wearing a properly fitted mask and using an alcohol-based sanitizer for their safety.	
1	e	<p>Discuss the stages of demographic cycle and explain the role of pharmacist in Family Planning.</p> <p>Marking Scheme:</p> <p>Explaining stages of demographic cycle - 2.5M (0.5M for each stage);</p> <p>Explaining the role of pharmacist in Family Planning – 2.5M (Any 5 Roles)</p>	5M



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		<p>Answer: Demographic Cycle: It comprises of following 5 stages –</p> <ol style="list-style-type: none">1. First Stage: It is “High Stationary Stage”. The feature of this phase is both natalities i.e., birth rate and mortality i.e. death rate are very high. Both cancel each other keeping population steady. India was in this phase till 1920.2. Second Stage: It is “Early Expanding Stage”. Here mortality starts falling but birth rate remains same i.e., higher. As a result, population starts increasing. At present African and South Asian countries are in this phase.3. Third Stage: It is “Late Expanding Stage”. Her mortality continues to fall but birth rate also started decreasing. But birth rate remains higher than death rate. So, population continues to increase. China, India, Singapore is at this stage.4. Fourth Stage: It is “Low Stationary Stage”. It is also called Zero Growth stage as birth rate equals death rate and both are lowered. So net population growth is zero. Many developed countries have reached this stage in last 20 years.5. Fifth Stage: It is “Negative Growth Stage”. Here death rate is higher than birth rate. So there is decline in population size. Reasons behind are advancement in medical science and facing problems of population increase. Germany and Hungary are presently at this stage.	2.5M																								
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Q. No.	Sub No.	Answers	Marking Scheme					
		<p>Role of Pharmacist in Family Planning:</p> <ol style="list-style-type: none">1. Display posters of various methods of family planning in hospitals and drug stores.2. Aware the patients about benefits and methods of family planning.3. Advice people about the importance of family planning and spacing of children.4. Distribute pamphlets of family planning.5. Explain various techniques of contraception and the use of oral contraceptives.6. Counsel public and conduct educational programmes highlighting the problems associated with high population.7. Educate and convince people about the advantage of small families.8. Refer government authorized family planning centres.	2.5M					
1	f	<p>Give the classification of communicable diseases and explain the role of pharmacist in prevention of them.</p> <p>Marking Scheme:</p> <p>Classification of communicable diseases: 2.5 M; (Each class with example: ½ M)</p> <p>Role of pharmacists: 2.5M (each role: ½ M)</p> <p>Answer:</p> <p>Communicable diseases are the diseases that spread from one person to another through different ways. They are also called infectious diseases.</p> <p>Classification:</p> <div style="text-align: center;"><p>Communicable Disease</p><pre>graph TD A[Communicable Disease] --> B[Respiratory infections] A --> C[Intestinal infections] A --> D[Arthropod-borne infections] A --> E[Surface infections] A --> F[Sexually transmitted infections]</pre></div> <table border="0" style="width: 100%;"><tr><td style="width: 20%;"><p>Respiratory infections</p><ul style="list-style-type: none">• Chickenpox• Measles• Rubella• Mumps• Influenza• Diphtheria• Whooping cough• Tuberculosis• Ebola</td><td style="width: 20%;"><p>Intestinal infections</p><ul style="list-style-type: none">• Poliomyelitis• Viral hepatitis• Cholera• Typhoid• Amebiasis• Worm infestations• Food Poisoning</td><td style="width: 20%;"><p>Arthropod-borne infections</p><ul style="list-style-type: none">• Dengue• Malaria• Filariasis• Chikungunya</td><td style="width: 20%;"><p>Surface infections</p><ul style="list-style-type: none">• Trachoma• Tetanus• Leprosy</td><td style="width: 20%;"><p>Sexually transmitted infections</p><ul style="list-style-type: none">• HIV / AIDS</td></tr></table>	<p>Respiratory infections</p> <ul style="list-style-type: none">• Chickenpox• Measles• Rubella• Mumps• Influenza• Diphtheria• Whooping cough• Tuberculosis• Ebola	<p>Intestinal infections</p> <ul style="list-style-type: none">• Poliomyelitis• Viral hepatitis• Cholera• Typhoid• Amebiasis• Worm infestations• Food Poisoning	<p>Arthropod-borne infections</p> <ul style="list-style-type: none">• Dengue• Malaria• Filariasis• Chikungunya	<p>Surface infections</p> <ul style="list-style-type: none">• Trachoma• Tetanus• Leprosy	<p>Sexually transmitted infections</p> <ul style="list-style-type: none">• HIV / AIDS	5M
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		<p>Role of Pharmacists in prevention of communicable diseases:</p> <ol style="list-style-type: none">1. Pharmacists can help public to understand the dangers of communicable diseases and guide them to prevent their occurrence in the community.	2.5 M					



Q. No.	Sub No.	Answers	Marking Scheme
		<ol style="list-style-type: none">Pharmacists can counsel people about antibiotic resistance due to irrational use of antibiotics.Pharmacists can counsel people about the importance of completing the entire course of treatment prescribed by the physician to avoid the reinfection of the disease by the pathogen and antibiotic resistance.Pharmacists can create an awareness program for the prevention of arthropod borne diseases and sexually transmitted diseases.Pharmacists can play an important role in vaccination program by counselling people regarding getting themselves vaccinated with proper follow up.Pharmacists can guide the community regarding the importance of hand washing, sanitation, cough/sneezing etiquettes, personal hygiene, nutrition and thereby help in the prevention of communicable diseases.Provide Drug related information and consulting to patients and health care professionals.Educating the health care professionals like doctors about the issues related to drug use process.Pharmacists can help prevent medical errors by increasing patient health literacy.	
1	g	<p>Define ‘Epidemiology’ and state the applications of Epidemiology. Explain the terms: Epidemic, Endemic and Pandemic.</p> <p>Marking Scheme:</p> <p>Definition of Epidemiology – 1M; Applications of Epidemiology:1M for Any 2 applications; Explanation of terms Epidemic:1M; Endemic:1M; Pandemic:1M</p> <p>Answer:</p> <p>Epidemiology:</p> <p>Epidemiology is defined as the study of the distribution and determinants of health-related events and diseases in the population and also the application of this knowledge to control health problems.</p> <p>Applications of Epidemiology:</p> <ol style="list-style-type: none">Epidemiological studies provide information about risk factors, causative agents, a host or carrier, and environmental contributors to the spread of the disease.It helps in the identification of diseases which regularly occur in a community.It provides logical data for the choice of drug, duration of exposure and dose to stop the spread of disease.It helps to devise strategies to treat and prevent diseases in a population.	<p>5M</p> <p>1M</p> <p>1M</p>



Q. No.	Sub No.	Answers	Marking Scheme
		<p>4. Spiritual health</p> <p>5. Emotional health,</p> <p>6. Socioeconomic health,</p> <p>7. Environmental health,</p> <p>8. Educational health nutritional health.</p> <p>1. Physical health:</p> <p>It is the perfect functioning of the body i.e., a state in which every cell and every organ is functioning at optimum capacity and in perfect harmony with the rest of body.</p> <p>The signs of physical health are:</p> <ul style="list-style-type: none">• Good complexion, clear skin, bright eyes• Lustrous hair with a body clothed with firm flesh, not too fat.• Sweet breath, sound sleep• Smooth, easy, coordinated body movements.• Good appetite, regular activity of bowel and bladder• All the organs of the body are of unexceptional size and function normally. <p>2. Mental health:</p> <p>It is defined as a state of balance between the individual and surrounding world, a state of harmony between oneself and others, has self-esteem, self-confidence, self-control and has respect for others.</p> <p>Characteristics:</p> <ul style="list-style-type: none">• They feel good about themselves.• They do not become overwhelmed by emotions, such as fear, anger, love, jealousy, guilt, or anxiety.• They have lasting and satisfying personal relationships.• They feel comfortable with other people.• They can laugh at themselves and with others.• They should be able to cope up with anxiety and stress, and so they are able to face the problems and solve them intelligently.• They can accept life's disappointments.• They make their own decisions. <p>3. Social health:</p> <p>It is ability of an individual to adjust with the society. It implies harmony and integration within the individual, between each individual and other members of society and between individuals and the world in which they live.</p>	



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Factors affecting social health are: Economic tension, poverty, illiteracy, unemployment and adverse social relations etc.</p> <p>Characteristics of Social health are:</p> <ul style="list-style-type: none">• Possession of social skills• Proper social functioning within the community• Ability of oneself to see as a member of the society. <p>4. Spiritual health: It plays a role in health and disease. It refers to that part of the individual which reaches out and strives for meaning and purpose in life. Spiritual health includes:</p> <ul style="list-style-type: none">• Integrity• Principles• Ethics• Commitment to some higher being. <p>5. Other: emotional health, socioeconomic health, environmental health, educational health nutritional health.</p> <p><i>(Explanation of any three dimensions should be considered)</i></p>	
2	b	<p>Give the long form of the following abbreviations. i) BCG ii) DPT iii) HIV</p> <p>Marking Scheme: 1M Each long form</p> <p>Answer:</p> <p>i) BCG Bacillus (of) Calmett (and) Guerin OR Bacillus Calmett Guerin</p> <p>ii) DPT Diptheria Pertussis Tetanus</p> <p>iii) HIV Human Immunodeficiency Virus</p>	3M
2	c	<p>What is Artificial Ripening? Enlist the chemicals used for artificial ripening give ill-effects of it.</p> <p>Marking Scheme: Artificial Ripening-1M; Chemicals-1M; ill effects-1M</p> <p>Answer:</p> <p>Artificial Ripening</p> <p>Ripening is a physiological process that makes the fruit edible, pleasant and nutritious. Normally, fruits release ethylene gas, a plant hormone that causes the fruits to mature, when this natural ripening process is carried out by some artificial means it is known as artificial ripening.</p>	3M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Chemicals used for artificial ripening.</p> <ul style="list-style-type: none">• Calcium Carbide (CaC_2)• Ethylene• Ethephon• Ethylene glycol. <p>Ill effects of Artificial Ripening:</p> <p>1. Effect of calcium carbide:</p> <ol style="list-style-type: none">i. It is explosive in nature, and it breaks the natural structure of vitamins and other micronutrients.ii. It creates only organoleptic changes, but fruit remains unripe from inside.iii. It contains toxic chemicals such as traces of arsenic, lead particles and phosphorus which may lead to vomiting, diarrhoea, burning eyes, ulcers on the skin etc.iv. The acetylene released by Calcium Carbide has been found to be detrimental as it affects the neurological system and reduces oxygen supply to the brain and further induces prolonged hypoxia. It is hazardous to pregnant women and children and may lead to headaches, dizziness, mood disturbances, mental confusion, memory loss, cerebral oedema (swelling in the brain caused by excessive fluids), sleepiness, seizure etc.v. Consuming such artificially ripened mangoes could result in sleeping disorders, mouth ulcers, skin rashes, renal problems and possibly even cancer. Apart from this symptom of poisoning include diarrhoea (with or without blood), burning or tingling sensation in the abdomen and chest difficulty in swallowing, irritation in the eyes/skin, sore throat, cough, shortness in breathing, numbness etc. <p>2. Ethephon, a pesticide can have adverse effects on nervous system. It may lead to cancer, liver, kidney, and lung damage.</p>	
2	d	<p>Enlist various Arthropod- borne infections and give the causative agent and Mode of transmission of Dengue.</p> <p>Marking Scheme: Enlist -1M; Causative agent -1M; Mode of transmission-1M.</p> <p>Answer:</p> <p>Arthropod borne diseases:</p> <ol style="list-style-type: none">1. Dengue2. Malaria3. Filariasis4. Chikungunya5. Plague	3M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Dengue:</p> <ul style="list-style-type: none">• Causative agent: Dengue fever is an infection caused by four distinct serotype of dengue viruses (DENV-1, DENV-2, DENV-3 and DENV-4).• Mode of transmission of Dengue: Human to mosquito and mosquito to human transmission are the primary modes of transmission for dengue fever.<ul style="list-style-type: none">○ Through Mosquito Bites: Dengue viruses are spread to people through the bites of infected <i>Aedes</i> species mosquitoes.○ From mother to child: A pregnant woman already infected with dengue can pass the virus to her foetus during pregnancy or around the time of birth.○ Through infected blood, laboratory, or healthcare setting exposures- Rarely, dengue can be spread through blood transfusion, organ transplant, or through a needle stick injury.	
2	e	<p>State what is meant by Drug Misuse and Abuse. Also give prevention and control of Drug Misuse and Abuse.</p> <p>Marking Scheme: Drug Misuse - 0.5 M; Abuse-0.5 M; Prevention and control of Drug Misuse and Abuse-2M (Any 4 Points)</p> <p>Answer:</p> <ul style="list-style-type: none">• Drug Misuse: Drug misuse refers to the use of a drug for purposes for which it is not intended or using drug in excessive quantities.• Drug Abuse: It is a condition when drugs including alcohol, illicit drugs or any psychoactive substances are misused to get high or cause self-harm. Drug abuse causes altered thinking, behaviours, and body functions. OR Excessive use of psychoactive drugs, such as alcohol, pain medications or illegal drugs. It can lead to physical, social, or emotional harm. <p>Prevention and control of Drug Misuse and Abuse:</p> <ol style="list-style-type: none">1. Effectively deal with peer pressure: The biggest reason teens start using illicit drugs is because their friends utilize peer pressure. In these cases, you need to either find a better group of friends that won't pressure you into doing harmful things, or you need to find a good way to say no.	3M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>2. Deal with life pressure: People today are overworked and overwhelmed and often feel like a good break or a reward is deserved. To prevent using drugs as a reward, find other ways to handle stress and unwind.</p> <p>3. Seek help for mental illness: Mental illness and substance abuse often go together. Those with a mental health illness may turn to drugs to ease the pain. Those suffering from some form of mental health illness, such as anxiety, depression or post-traumatic stress disorder should seek the help of a trained professional for treatment before it leads to substance use.</p> <p>4. Examine every risk factor: A history of substance abuse in the family, living in a social setting that glorifies drug abuse and/or family life that models drug abuse can be risk factors.</p> <p>5. Keep a well-balanced life: People take up drugs when something in their life is not working, or when they're unhappy about their lives or where their lives are going. Look at life's big picture and have priorities in order.</p> <p>6. Education: Drug abuse prevention begins with education, spreading the word regarding the dangers of drugs to oneself and to the community. Drug prevention programs seek to involve the family, community, or workplace in the prevention process. To be effective, communities need to sustain the progress. This often requires continued leadership and financial support.</p> <p>Programs for Drug Prevention</p> <p>1. Family-Based Drug Prevention. The prevention of drug abuse should start inside the family unit as early as possible. This includes creating an effective system of monitoring their children's activities.</p> <p>2. School-Based Drug Abuse Prevention Programs. Drug abuse prevention should be addressed as early as preschool. Preschool children can benefit from learning how to handle aggression, solve problems, and communicate better so that they can avoid putting themselves at risk for drug abuse later in life. Middle and high school programs should focus on peer relationships, communication, assertiveness, drug resistance skills and developing anti-drug attitudes. School based prevention programs should be repeated often for the best level of success.</p>	



Q. No.	Sub No.	Answers	Marking Scheme
		<p>3. Community-Based Drug Abuse Prevention Programs. Communities that try to come together in the fight against drugs are sure to make an impact in the prevention of drug abuse.</p>	
2	f	<p>Explain the role of pharmacist in National Health programmes.</p> <p>Marking Scheme: 3M (For any 6 role)</p> <p>Answer:</p> <ol style="list-style-type: none">1. Early detection & prompt referral for treatment by; Identifying symptomatic cases, Referring to diagnostic centers, Drug Distribution Centers (DDC), Fever Treatment Depots (FTDs), etc.2. Ensuring rational use of prescribed medicines.3. Sensitizing people about various vector control measures.4. Counselling to the patients, Providing consumer health information.3. In the case of TB easy access for patients to the Government's free anti-TB medicines i.e., DOTS.4. Early identification of TB suspects, avoiding diagnostic delays.5. Pharmacists should be involved in the procurement, storage & distribution of quality medicines.6. They can monitor ARV therapy and ensure the proper use of medicines.7. Pharmacists can get involved in various HIV prevention programs of NACO like; Blood safety, STD control, Condom promotion, IEC & social mobilization, Care, support & treatment of patient living.8. Spreading the message of the small family norm and its advantages.9. Providing a reservoir of knowledge on family planning methods.10. Distributing family planning literature freely so that the customer can carry it home.11. By having access to medicinal records, the pharmacists are in a position to influence the selection of medicines, and dosage regimens, monitor patient compliance and therapeutics, and recognize and report adverse drug reactions (Pharmacovigilance).12. Counselling patient sensitizing and creating awareness among the public through Carrying out seminars, exhibitions, consumer awareness programs, etc. patient information, and counselling on De-addiction services.	3M



Q. No.	Sub No.	Answers	Marking Scheme
2	g	<p>Define Microbiology and give the classification of Bacteria depending on shape.</p> <p>Marking Scheme: Definition – 1M; Classification – 2M. (½ mark for each class)</p> <p>Answer:</p> <p>Microbiology:</p> <p>It is the study of microorganisms with respect to their cytology, physiology, reproduction and useful activities or harms caused.</p> <p style="text-align: center;">OR</p> <p>Microbiology is the study of microscopic organisms It is derived from three Greek words - mikros ("small"), bios ("life") and logos (science")</p> <p>Classification: Bacteria are classified based on their shapes as</p> <ol style="list-style-type: none">1. Cocci – Bacteria spherical or round2. Bacilli – Rod shaped bacteria3. Spirilla – Rigid spiral or spring shaped bacteria4. Vibrios – Comma shaped bacteria5. Spirochaetes – Spirochaetes6. Actinomycetes – Branching filamentous bacteria.7. Mycoplasmas – Round or oval bodies as they lack cell wall. So shape is not fixed.	3M
2	h	<p>State what is Balanced Diet? Enlist various ill effects of junk foods.</p> <p>Marking Scheme: Definition-1M; Ill effects-2M (Any 4 effects)</p> <p>Answer:</p> <p>Balanced Diet:</p> <p>A diet which contains proper amount of calorie, vitamins and minerals needed to keep a person healthy is referred to as balanced diet.</p> <p style="text-align: center;">OR</p> <p>Balanced diet is such diet that contains different types of foods in correct proportions so that body's demand for amino acids, fats, carbohydrates, minerals, vitamins, other nutrients, and energy is sufficed; so that malnutrition is prevented, and health is maintained.</p> <p style="text-align: center;">OR</p> <p>Food which contains adequate amounts of all nutrients namely:</p> <ul style="list-style-type: none">• Carbohydrates (50%)• Proteins (35%)• Fats (12%)• Minerals (03%)• Vitamins and sufficient water.	3M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Ill effects of junk food:</p> <ol style="list-style-type: none">1) Excess consumption of junk foods leads to inadequate growth and development of the body.2) Junk foods contribute to an increased risk of obesity, diabetes, cardiovascular disease, and many other chronic health conditions.3) High intake of junk foods tends to suppress the function of the brain that helps in learning and memory formation.4) One of the bad effects of junk food is overeating. It may lead to loss of appetite and problems in digestion.5) Junk food has a negative impact on energy level and emotional well-being.6) Junk food also has a mental impact which leads to mental depressions.	
2	i	<p>Define the term “Pharmacoeconomics”.</p> <p>Marking Scheme: Definition with proper explanation: 3M</p> <p>Answer:</p> <p>Pharmacoeconomics</p> <ul style="list-style-type: none">• Field of study that evaluates the behaviours of individuals, firms and markets relevant to use of pharmaceutical products, services and programs, and which frequently focuses on the costs and consequences of that use.• It is defined as the analysis of the cost of drug therapy to health care system and society.• It is a sub-discipline of health economics.• A Pharmacoeconomics study evaluates the cost (expressed in monetary terms) and effects (expressed in terms of monetary value, efficacy, or enhanced quality of life) of a pharmaceutical product.• Pharmacoeconomics studies serve to guide optimal healthcare resource allocation, in a standardized and scientifically grounded manner.• Pharmacoeconomics refers to the scientific discipline that compares the value of one pharmaceutical drug or drug therapy to another.• Pharmacoeconomics analysis helps in determining the cost impact of innovative treatments and helps in granting more recognition by health care providers, policy makers and public.	3M



Q. No.	Sub No.	Answers	Marking Scheme
		<p>Marking Scheme: For each disease-1M (Causative agent-0.5 M & Mode of Transmission-0.5 M)</p> <p>Answer:</p> <p>1) Whooping Cough</p> <ul style="list-style-type: none">• Causative agent: It is an infectious disease caused by <i>Bordetella Pertussis</i>.• Mode of Transmission: The source of infection is infected patient. The disease spreads by droplet infection & through fomites. <p>2) Poliomyelitis</p> <ul style="list-style-type: none">• Causative agent: Poliomyelitis Virus serotype I or II or III.• Modes of Transmission:<ul style="list-style-type: none">○ Main transmission is through Faeco-oral route.○ Another route is the droplet infection, this occurs in the acute phase of disease when the virus occurs in the throat. Close personal contact with an infected person facilitates droplet infection. <p>3) Tetanus</p> <ul style="list-style-type: none">• Causative Agent: <i>Clostridium tetani</i>• Modes of Transmission:<ul style="list-style-type: none">○ Main transmission is through contamination of wounds by tetanus spores.○ The injuries that can cause tetanus are pin prick, abrasion, puncture wound, burn, human bite, animal bite, stings, unsterile injections or surgical instruments, compound fractures, etc	
3		Answer all questions	20M
		<p style="text-align: center;">:: Important Instructions ::</p> <p><i>In case, multiple answer options are observed for the same sub-question of question No. 3, the option (Answer) appearing first in the answer book shall be treated as answer and assessed accordingly.</i></p>	
3	a	<p>First National Health Policy was launched in the year _____</p> <p>Answer: iii) 1983</p>	1M
3	b	<p>_____ is a permanent sterilization surgery meant for men.</p> <p>Answer: iv) Vasectomy</p>	1M



Subject Title: SOCIAL PHARMACY- THEORY

Subject Code: 20115

Q. No.	Sub No.	Answers	Marking Scheme
3	c	The causative agent of Chicken pox is _____ Answer: i) Varicella Zoster	1M
3	d	Kwashiorkor and Marasmus are deficiency disease of _____ Answer: ii) Proteins	1M
3	e	_____ programme was initiated by the Government of India during 7th Five Year plan in 1987. Answer: iii) Iodine deficiency	1M
3	f	The chief reason for using _____ is to define monetary value of a saving human life. Answer: ii) Cost-benefits analysis	1M
3	g	Bacteria that appear violet in colour after the staining process is _____ Answer: ii) Gram Positive Bacteria	1M
3	h	The Breast-Feeding Awareness week is celebrated by WHO on _____ Answer: i) First Week of August, Every year	1M
3	i	FIP consist of _____ board. Answer: i) Board of Pharmaceutical Sciences.	1M
3	j	The Headquarter of “National AIDS Control Organization” (NACO) located in _____ Answer: ii) New Delhi	1M
3	k	Antibiotic-Tetracycline shows food interaction with _____ Answer: iv) Dairy products	1M
3	l	Neutral Spirit contains _____ Alcohol by volume. Answer: iii) 90 - 95%	1M
3	m	Incubation period of Leprosy is _____ Answer: iv) 2-5 Years	1M



Q. No.	Sub No.	Answers	Marking Scheme
3	n	Sustainable Development Goals (SDGS) adopted by the United Nations has _____ number of goals. Answer: i) 17	1M
3	o	NPCDCS stands for: - National Programme for Prevention and Control of _____ Answer: i) Cancer, Diabetes, Cardiovascular diseases & Stroke	1M
3	p	Risk of illness or accidents in the workplace are known as _____ hazards. Answer: ii) Occupational	1M
3	q	IEC stand for _____ Answer: i) Information, Education & Communication	1M
3	r	An ideal health indicator should be _____ Answer: iv) All of the above	1M
3	s	The objectives of National Mental Health Programme (NMHP) are _____ Answer: ii) To encourage the application of mental health knowledge in general healthcare and in social development	1M
3	t	Entamoeba histolytica is the causative agent of _____ Answer: iv) Amoebiasis	1M