

यस पाठ्यक्रम योजनालाई दुई चरणमा विभाजन गरिएको छ :

प्रथम चरण :- लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

द्वितीय चरण :- (क) सामूहिक परीक्षण (Group Test)

पूर्णाङ्क :- १०

(ख) अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ३०

परीक्षा योजना (Examination Scheme)

प्रथम चरण : लिखित परीक्षा (Written Examination)

पूर्णाङ्क :- २००

पत्र	विषय	खण्ड	पूर्णाङ्क	उर्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्नसंख्या X अङ्क	समय	
प्रथम	General Subject	Part I: General Awareness & General Ability Test	१००	४०	वस्तुगत (Objective)	बहुवैकल्पिक प्रश्न (MCQs)	५० प्रश्न X १ अङ्क	१घण्टा ३० मिनेट
		Part II: General Technical Subject					५० प्रश्न X १ अङ्क	
द्वितीय	Technical Subject	१००	४०	विषयगत (Subjective)	छोटो उत्तर लामो उत्तर	४ प्रश्न X ५ अङ्क ८ प्रश्न X १० अङ्क	३ घण्टा	

द्वितीय चरण : सामूहिक परीक्षण (Group Test) र अन्तर्वार्ता (Interview)

पूर्णाङ्क :- ४०

पत्र / विषय	पूर्णाङ्क	उर्तीर्णाङ्क	परीक्षा प्रणाली	समय
सामूहिक परीक्षण (Group Test)	१०		सामूहिक छलफल (Group Discussion)	३० मिनेट
अन्तर्वार्ता (Interview)	३०		बोर्ड अन्तर्वार्ता (Board Interview)	-

द्रष्टव्य :

- लिखित परीक्षाको माध्यम भाषा नेपाली वा अंग्रेजी अथवा नेपाली र अंग्रेजी दुवै हुनेछ ।
- प्रथमपत्र र द्वितीय पत्रको लिखित परीक्षा छुटाछुटै हुनेछ ।
- वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नहरूको गलत उत्तर दिएमा प्रत्येक गलत उत्तर बापत २० प्रतिशत अङ्क कट्टा गरिनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
- बहुवैकल्पिक प्रश्नहरू हुने परीक्षामा कुनै प्रकारको क्याल्कुलेटर (Calculator) प्रयोग गर्न पाइने छैन ।
- विषयगत प्रश्नहरूको हकमा तोकिएको अंकको एउटा लामो प्रश्न वा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोधन सकिने छ ।
- द्वितीय पत्रमा (विषयगत प्रश्न हुनेका हकमा) प्रत्येक खण्डका लागि छुटाछुटै उत्तरपुस्तिकाहरू हुनेछन् । परीक्षार्थीले प्रत्येक खण्डका प्रश्नहरूको उत्तर सोहीखण्डको उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
- यस पाठ्यक्रम योजना अन्तर्गतका पत्र/विषयका विषयवस्तुमा जेसुकै लेखिएको भए तापनि पाठ्यक्रममा परेका कानून, ऐन, नियम तथा नीतिहरू परीक्षाको मिति भन्दा ३ महिना अगाडि (संशोधन भएका वा संशोधन भई हटाईएका वा थप गरी संशोधन भई) कायम रहेकालाई यस पाठ्यक्रममा परेको सम्भन्न पर्दछ ।
- प्रथमचरणको परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र द्वितीयचरणको परीक्षामा सम्मिलित गराइनेछ । पाठ्यक्रम लागू मिति : २०७८।०३।२७ गते देखि ।

प्रथम पत्र (Paper I): General Subject

Part (I) : - General Awareness & General Ability Test (50 Marks)

1. **General Awareness and Contemporary Issues** **(25 ×1 Mark = 25 Marks)**
 - 1.1 Physical, socio-cultural and economic geography and demography of Nepal
 - 1.2 Major natural resources of Nepal
 - 1.3 Geographical diversity, climatic conditions, and livelihood & lifestyle of people
 - 1.4 Notable events and personalities, social, cultural and economic conditions in modern history of Nepal
 - 1.5 Current periodical plan of Nepal
 - 1.6 Information on sustainable development, environment, pollution, climate change, biodiversity, science and technology
 - 1.7 Nepal's international affairs and general information on the UNO, SAARC & BIMSTEC
 - 1.8 The Constitution of Nepal (From Part 1 to 5 and Schedules)
 - 1.9 Governance system and Government (Federal, Provincial and Local)
 - 1.10 Provisions of civil service act and regulation relating to constitution of civil service, organisational structure, posts of service, fulfillment of vacancy and code of conduct
 - 1.11 Functional scope of public services
 - 1.12 Public Service Charter
 - 1.13 Concept, objective and importance of public policy
 - 1.14 Fundamentals of management : planning, organizing, directing, controlling, coordinating, decision making, motivation and leadership
 - 1.15 Government planning, budgeting and accounting system
 - 1.16 Major events and current affairs of national and international importance
 - 1.17 Province no.2, Civil Service Act, 2077
2. **General Ability Test** **(25 ×1 Mark = 25 Marks)**
 - 2.1 **Verbal Ability Test** (8×1 Mark = 8 Marks)
Jumble words, Series, Analogy, Classification, Coding-Decoding, Matrix, Ranking Order Test, Direction and Distance Sense Test, Common Sense Test, Logical Reasoning, Assertion and Reason, Statement and Conclusions
 - 2.2 **Numerical Ability Test** (9×1 Mark = 9Marks)
Series, Analogy, Classification, Coding, Arithmetical reasoning/operation, Percentage, Ratio, Average, Loss & Profit, Time & Work, Data interpretation & Data verification
 - 2.3 **Non-verbal/Abstract Ability Test** (8×1 Mark = 8 Marks)
Figure Series, Figure Analogy, Figure Classification, Figure Matrix, Pattern Completion/Finding, Analytical Reasoning Test, Figure Formation and Analysis, Rule Detection, Water images, Mirror images, Cubes and Dice &Venn-diagram

Part (II) : - General Technical Subject (50 Marks)

1.	Aquaculture	34
1.1	History of fish culture in Nepal	
1.2	Province no.2, Livestock related Status and Statistics	
1.3	Present status and prospect of aquaculture in Nepal	
1.4	Principle of aquaculture	
1.5	Definition of fisheries and aquaculture	
1.6	Fish farm design and construction	
1.6.1	Planning	
1.6.2	Site selection	
1.6.3	Soil texture and quality	
1.6.4	Topography and layout of fish pond	
1.6.5	Pond construction	
1.6.6	Water budgeting & sources of water	
1.7	Species selection for pond fish culture	
1.8	Cultivated indigenous & exotic fish species in Nepal	
1.9	Aquatic ecology in relation to fish production	
1.10	Hatchery management techniques	
1.10.1	Brood fish management	
1.10.2	Fish breeding (natural & induced)	
1.10.3	Nursing and rearing of hatchling, fry, fingerlings (fish) seed	
1.10.4	Transportation of hatchling, fry, fingerlings (fish) seed	
1.10.5	Feed and fertilizer	
1.10.6	Improvement by selection	
1.10.7	Hybridization	
2.	Introduction to Ichthyology	16
2.1	Definition of fish, economic importance of fish	
2.2	Taxonomy, economically important fishes of Nepal: General characters and classification of class Pisces	
2.3	Morphology of fish: external features, shape and size, structure and functions of different organs	
2.4	Anatomy of fish: Study of location and functions of different organs	
2.5	Different organ systems: structure and functions	
2.5.1	Digestive system-structure and functions of alimentary canal	
2.5.2	Respiratory system- structure and function of gills	
2.5.3	Reproductive system- structure and functions of gonads	
2.6	Endocrine system related to reproduction	
3.	Water quality management in pond culture	10
3.1	Relationship between water quality parameter and fish production	
3.2	Planktons	
3.3	Aquatic weeds and its control	
3.4	Water quality management	

4. Nutrition	10
4.1 Feed formulation	
4.2 Feed preparation and nutrition value	
4.2.1 Major nutrients	
4.2.2 Vitamin	
4.2.3 Essential minerals and amino acids	
5. Fish health management	10
5.1 Common fish disease - causes, symptoms & species affected	
5.2 Types of general fish diseases - infections & non-infections	
5.3 Different methods of treatment: prevention, prophylaxis and treatment: sanitation of aquaculture equipments, quarantine and restriction of movements, curative measure: dip bath, flush, pond treatment	
6. Post harvest technology	6
6.1 Nutritional significance of fish production	
6.2 Quality control	
6.3 Methods of preservation and processing	
6.3.1 Fish drying	
6.3.2 Fish smoking	
6.3.3 Curing	
6.3.4 Fish chilling & refrigeration	
6.3.5 Transportation	
7. Capture Fisheries	14
7.1 Limnological studies	
7.2 Stock enhancement biodiversity conservation and management	
7.3 Freshwater ecology and consequences	
7.4 The effects of water resource development & human activities eg. Hydraulic works/illegal fishing, etc) on aquatic ecosystems & mitigation measures for the sustainable utilization of natural water bodies in Nepal	

Section A— 30 Marks

1. **Aquaculture Production Systems in Nepal** 30

- 1.1 Aquaculture Practices
 - 1.1.1 Cage fish culture
 - 1.1.2 Enclosure fish culture
 - 1.1.3 Raceway fish culture
 - 1.1.4 Integrated fish culture
 - 1.1.5 Rice fish culture
- 1.2 Aquaculture Systems
 - 1.2.1 Monoculture
 - 1.2.2 Polyculture
 - 1.2.3 Monosex culture
- 1.3 Aquaculture Techniques
 - 1.3.1 Extensive
 - 1.3.2 Semi-intensive
 - 1.3.3 Intensive
 - 1.3.4 Super-intensive

Section B— 20 Marks

2. **Management Practices in Aquaculture** 10

- 2.1 Management techniques in Nursery, Rearing and Production Ponds
- 2.2 Application of feed, fertilizer and chemicals, liming and organic manure in ponds
- 2.3 Importance of growth checkup
- 2.4 Water quality management
- 2.5 Record keeping

3. **Natural water Fisheries Programs** 10

- 3.1 Importance of bio-limnological study
- 3.2 Environmental factors and its effects to fish population
- 3.3 Factors affecting survival and migration of fish
- 3.4 Stock enhancement, biodiversity, conservation & management

Section C— 20 Marks

4. **Fish breeding techniques** 10

- 4.1 Site selection and design of a carp fish hatchery
- 4.2 Brood fish management
- 4.3 Criteria for brood fish selection
- 4.4 Natural breeding
- 4.5 Semi-artificial breeding
- 4.6 Induced breeding
- 4.7 Application of hormones in induced breeding
- 4.8 Incubation techniques
- 4.9 Endocrine system related to reproduction
- 4.10 Fish Physiology
 - 4.10.1 Physiological systems and osmoregulation
 - 4.10.2 Function of different organ system (Digestive, Reproductive, Respiratory)

5. Fish Health Management	10
5.1 Factors affecting fish health	
5.2 Identification of fish diseases and parasites	5.3 Lab techniques
5.4 Treatment procedures/ Control mechanisms	

Section D– 30 Marks

6. Plan and policy	10
6.1 Recent five years fisheries development plan	
6.2 Recent policies in fisheries development	
6.3 Present aquaculture status in Nepal	
6.4 Agriculture prospective plan	
6.5 Fisheries prospective plan	
6.6 Province no.2, Agriculture related Plans and Policies	
6.7	
7. Aquaculture Extension	10
7.1 Extension methodology, tools & communication systems	
7.2 Participatory approach in planning, implementation and monitoring	
7.3 Capacity building of farms and extension services	
7.4 Pocket package program	
7.5 Social mobilization, gender, integration and group dynamics	
7.6 Public, Private, NGOs, CBOs, Partnership, Contract- out program	
8. Miscellaneous	10
8.1 Fish Marketing, Aquaculture economics and credit support system	
8.2 Province no.2, Agriculture related Acts, Rules and Regulations	
8.3 जलचर संरक्षण ऐन, २०१७; तथा पशु स्वास्थ्य तथा पशु सेवा ऐन, २०५५ र नियमावली, २०५६	

कृषि सेवाका विभिन्न समूह/उपसमूह, अधिकृत सातौं तहको पदमा प्रथम चरणको लिखित परीक्षाबाट छनौट भएका उम्मेदवारहरूलाई मात्र सामूहिक परीक्षण (**Group Test**) लिइने छ ।

सामूहिक छलफल (Group Discussion)

यस प्रयोजनका लागि गरिने परीक्षण १० पूर्णाङ्क र ३० मिनेट अवधिको हुनेछ जुन नेता विहिन सामूहिक छलफल (Leaderless Group Discussion) का रूपमा अवलम्बन गरिने छ । दिइएका प्रश्न वा Topic का विषयमा पालैपालोसँग निर्दिष्ट समय भित्र समूह बीच छलफल गदै प्रत्येक उम्मेदवारले व्यक्तिगत प्रस्तुति (Individual Presentation) गर्नु पर्नेछ । यस परीक्षणमा मूल्याङ्कनका लागि ३ जना भन्दा बढीको समिति रहनेछ ।