Samarqand viloyati kasbiy ko’nikmalar mintaqaviy markazining

**2025 yil “26” avgustdagi, \_\_\_\_\_\_\_\_-sonli** buyrug’iga

II-ilova

**Metallarga ishlov berish mexanigi (mashinasozlik texnologiyasi) kasbi 1+2 loyihasi doirasidagi 2-oqim talabalari uchun Ya DAK imtihonlari uchun namunaviy nazariy va amaliy topshiriq savollari**

1. Tokarniy mashinasi bilan diametri 20 quvurga 15 mm rezba oching.
2. Tokarniy mashinasi bilan diametri 50 quvurga 30 gradus faska oching.
3. Tokarniy mashinasi bilan diametri 20 quvurga 2 mm faska oching.
4. Tokarniy mashinasi bilan diametri 50 turbani 15 mm kesib oling.
5. Tokarniy mashinasi bilan diametric 20 prutokga markaz belgilang.
6. Tokarniy mashinasi bilan diametri 40 prutokga 20 mm parmalang.
7. Tokarniy mashinasi bilan diametri 35 prutokga 20mm ichki rezba oching.
8. Tokarniy mashinasi bilan diametri 38 prutokga 15 mm masofaga 2 mm paz oching.
9. Tokarniy mashinasi bilan diametri 40 prutokga ichki diamaetri 15 mm yo’ning.
10. Tokarniy mashinasi bilan diametri 40 prutokga 45 gradus ishlov bering.
11. Tokarniy mashinasi bilan diametri 35 prutokga 20 mm automatik ishlov bering.
12. Tokarniy mashinasi bilan diametri 10 pturokga 5 mm rezba oching.
13. Tokarniy mashinasi bilan diametri 20 prutokka ichki rezba oching.
14. Tokarniy mashinasining yog’lash tizimini tekshiring.
15. Tokarniy mashinasining knematik sxemasini tushuntirib bering.
16. Frezerniy mashinasining knematik sxemasini tushuntirib bering.
17. Frezerniy mashinasi bilan 20mm listni ustki yuzasini 2 mm ishlov bering.
18. Frezerniy mashinasi bilan 40mm plastinaga 15 mm fasofadan 20 mm paz oching.
19. Frezerniy mashinasi bilan metal plastinaga 15 mm parmalang.
20. Frezerniy mashinasi bilan 4 ta teshik xosil qilib zenkofkalang.
21. Frezerniy mashinasi bilan 15 mm ichki rezba oching.
22. Frezerniy mashinasi bilan aylana yuzalarga ishlov bering.
23. Frezerniy mashinasi bilan vertikal yuzaga ishlov berib ko’rsating.
24. Frezerniy mashinasi bilan garizantal yuzaga ishlov berib ko’rsating.
25. Frezerniy mashinasi o’qlarini tushuntirib bering.
26. Frezerniy mashinasi z o’qi boylab 15 mm tushuring.
27. Frezerniy mashinasini tezliklarni rostlashni ko’rsating.
28. Frezerniy mashinasi bilan sentr belgilang.
29. Frezerniy mashinasining turlari xaqida malumot bering.
30. Frezerniy mashinasi bilan qanday detallarga ishlov berib bo’lmaydi.

***Izoh:*** *Asosiy amaliy topshiriqlar, variantlar asosida keying betlarda ilova qilingan.*

**Asosiy amaliy topshiriqlar to’plami**

**Variant-1**

|  |  |  |
| --- | --- | --- |
| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** |  | Detalni **CNCpro** dasturida yasang |

**Variant-2**

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| **1** | Чертёж — Википедия | Chizmani o'qing va tushuntirib bering |
| **2** | NUM CNC Mill Program Example with G45 Pocket Milling G81 G84 G87 - Helman  CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** |  | Detalni **CNCpro** dasturida yasang |

**Variant-3**

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| --- | --- | --- |
| **1** | Создание чертежей в AutoCad для новичков | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** |  | Detalni **CNCpro** dasturida yasang |

**Variant-4**

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| **1** | Создание 2D чертежа детали корпуса в AutoCAD 2017 - YouTube | Chizmani o'qing va tushuntirib bering |
| **2** | CNC Programming Examples - G91 Incremental Programming | Tutorials  Programming | Cnc programming, Cnc programmer, Cnc lathe | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC Lathe Resources | Detalni Tokarlik **CNCpro** dasturida yasang |

**Variant-5**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** | OD Turning with G73 Pattern Repeating Cycle CNC Lathe Example Program -  Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC G81 Drilling Cycle Program Example - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-6**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** | Canned Cycle | SpringerLink | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Analysis of CNC Turning Process for CNC Turned Parts | Detalni **CNCpro** dasturida yasang |

**Variant-7**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Fanuc G15 G16 Polar Coordinate Command Bolt Circle Program Example - Helman  CNC | Detalni **CNCpro** dasturida yasang |

**Variant-8**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | diagramlathe | XYZ Machine Tools | Detalni **CNCpro** dasturida yasang |

**Variant-9**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Основы T-FLEX CAD. Построение простой детали - Метод 1 | Detalni **CNCpro** dasturida yasang |

**Variant-10**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** | CNC Program Outside Turning with Radius - Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Sinumerik 810 CNC Mill Radius/Chamfer Program Example - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-11**

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| **1** | Индивидуальные курсы, обучение AutoCAD Омский техникум информ | Chizmani o'qing va tushuntirib bering |
| **2** | Vertical Machining Center Programming Example CNC - Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC Programming Examples - Chamfer Radius | Tutorials Programming | Cnc  programming, Programming tutorial, Cnc | Detalni **CNCpro** dasturida yasang |

**Variant-12**

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| --- | --- | --- |
| **1** | CNC Lathe Resources | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | NC programming milling machine. | Download Scientific Diagram | Detalni **CNCpro** dasturida yasang |

**Variant-13**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** | CNC School Basic CNC Program Example CNC Turning - Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Siemens CNC Milling | POCKET3 | Milling a Rectangular Pocket - Cnc Code  questions and answers cnc lathe cnc machine platform | Detalni **CNCpro** dasturida yasang |

**Variant-14**

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| **1** | 14 CNC. ROYAL MECH ideas | mech, autocad, india images | Chizmani o'qing va tushuntirib bering |
| **2** | Pocket Milling - an overview | ScienceDirect Topics | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC Arc Programming G02 G03 Example - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-15**

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| **1** | Компьютерные курсы и IT обучение в Харькове.: Курс &quot;AutoCAD &quot; | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC G81 Drilling Cycle Program Example - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-16**

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| **1** | Задание 3. Задача №1 | Chizmani o'qing va tushuntirib bering |
| **2** | fanuc 0it - Clearance Sale - | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Canned Cycle | SpringerLink | Detalni **CNCpro** dasturida yasang |

**Variant-17**

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| **1** |  | Chizmani o'qing va tushuntirib bering |
| **2** | GSK 980 TDc Programming Example G02 G03 Joining Arcs - Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Sinumerik 810 CNC Mill Radius/Chamfer Program Example - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-18**

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| **1** | Выполнение чертежей деталей со сложными разрезами - Инженерная и  компьютерная графика | Chizmani o'qing va tushuntirib bering |
| **2** | CNC Programming Example in Inch Simple CNC Lathe Program - Helman CNC | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | CNC Mill Program with G41 Cutter Radius Compensation Left - Helman CNC | Detalni **CNCpro** dasturida yasang |

**Variant-19**

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| **1** | Сварные соединения деталей | Chizmani o'qing va tushuntirib bering |
| **2** |  | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Cnc Programming | Detalni **CNCpro** dasturida yasang |

**Variant-20**

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| **1** | Сварные соединения деталей (прмер оформления работы) | Chizmani o'qing va tushuntirib bering |
| **2** | fanuc 0it - Clearance Sale - | Chizmani **SolidWorks** dasturida chizib, **G-M** kod yoki Solid **CAM** dasturida programma tuzing |
| **3** | Solved Programming with Canned Cycles: Circular and | Chegg.com | Detalni **CNCpro** dasturida yasang |

**Tuzuvchi:**

Mashinasozlik va elektronika

bo’limi boshlig’i  **R.Xo’jamatov**